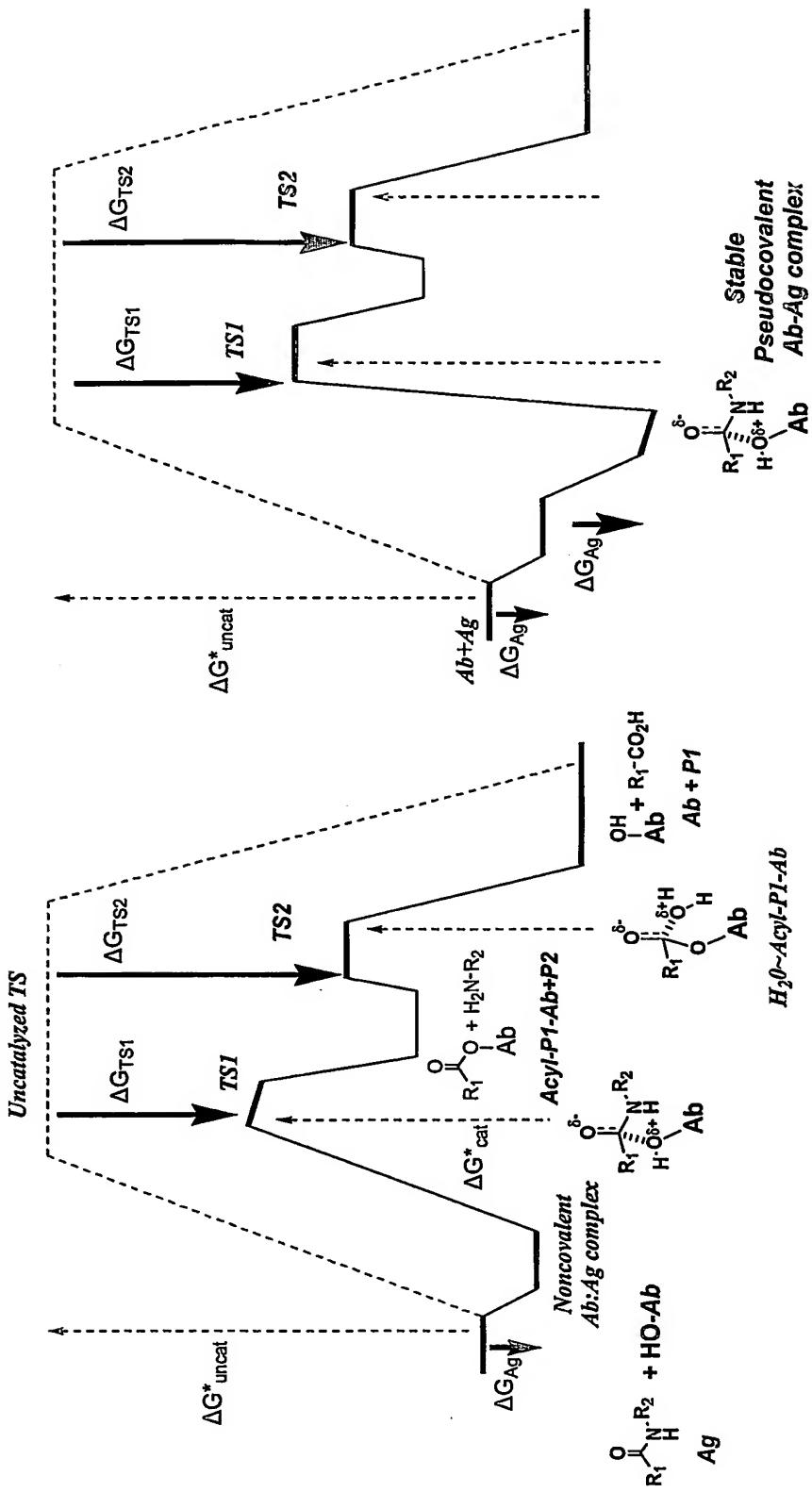


# *Catalysis and covalent binding energies of antibodies*



1  
Eig

BEST AVAILABLE COPY

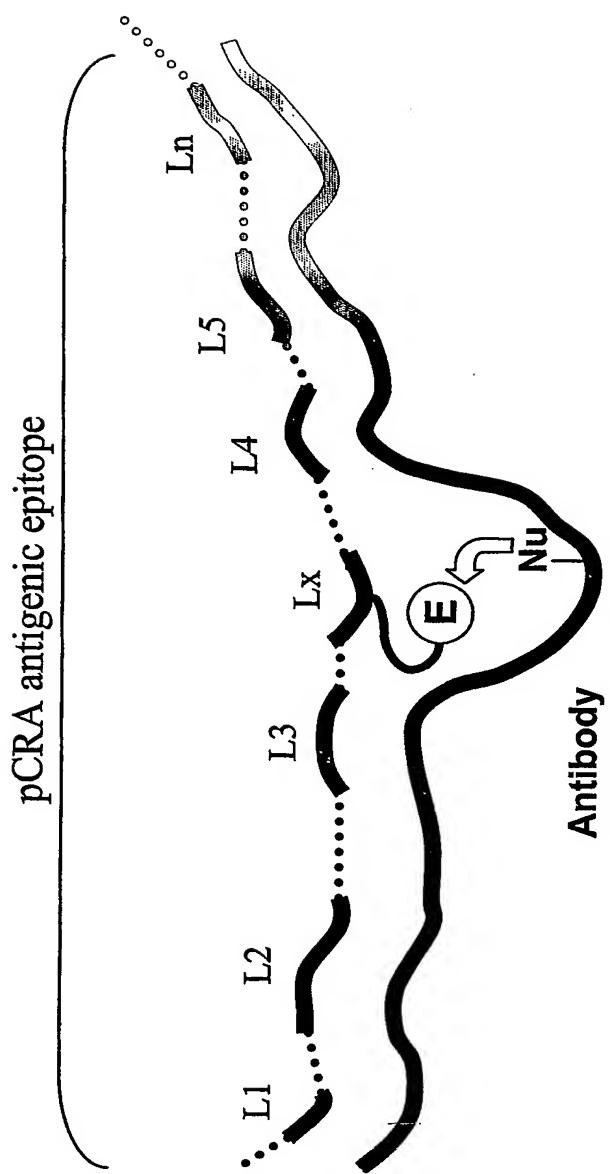
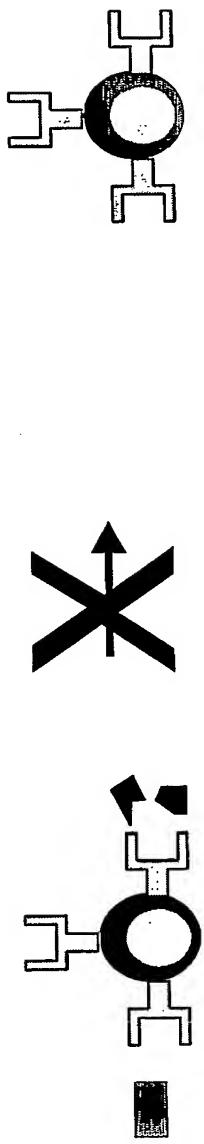


Fig 2

# Induction of catalyst synthesis

Ordinary polypeptide antigen,  
Slow transmembrane signal  
Aborted clonal selection,  
tolerance



Covalent stimulation,  
Rapid transmembrane signal  
Increased turnover, proliferation

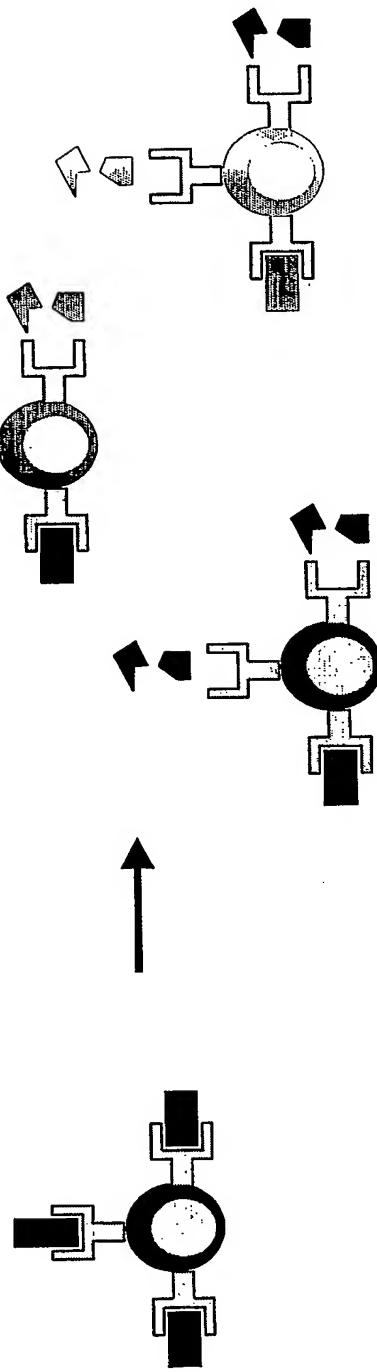
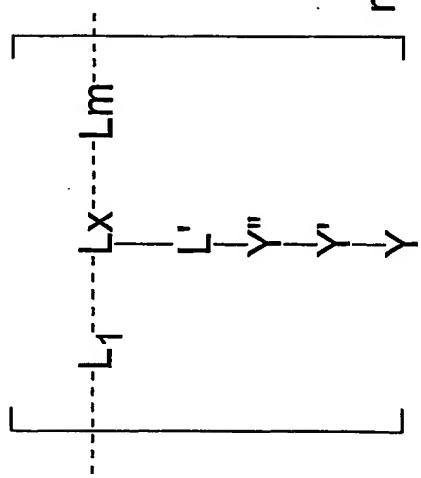


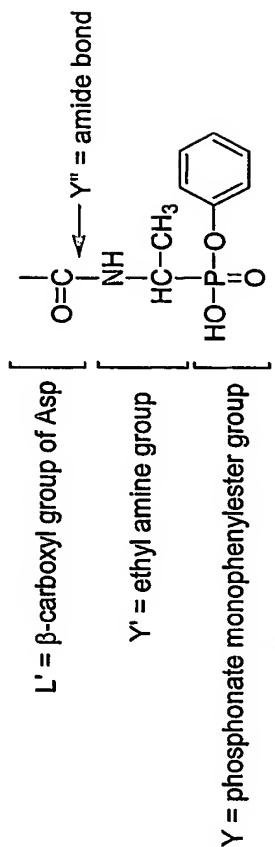
Fig 3

**Fig 4**

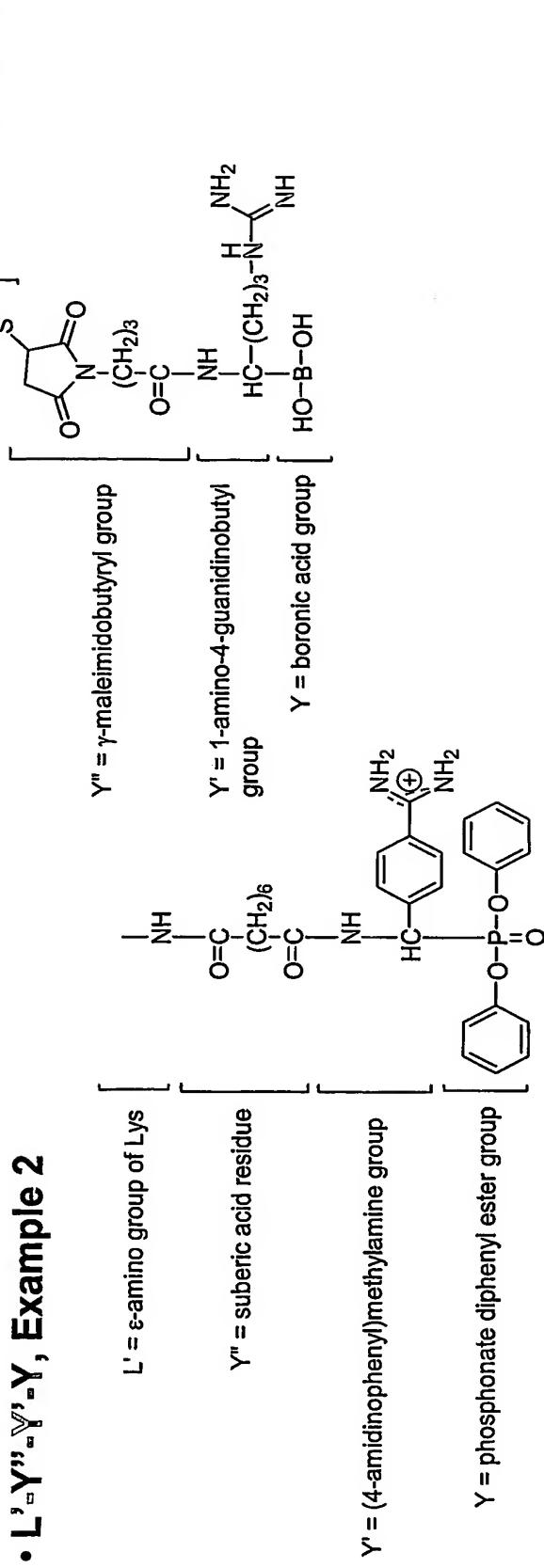
**General structure of pCRA**

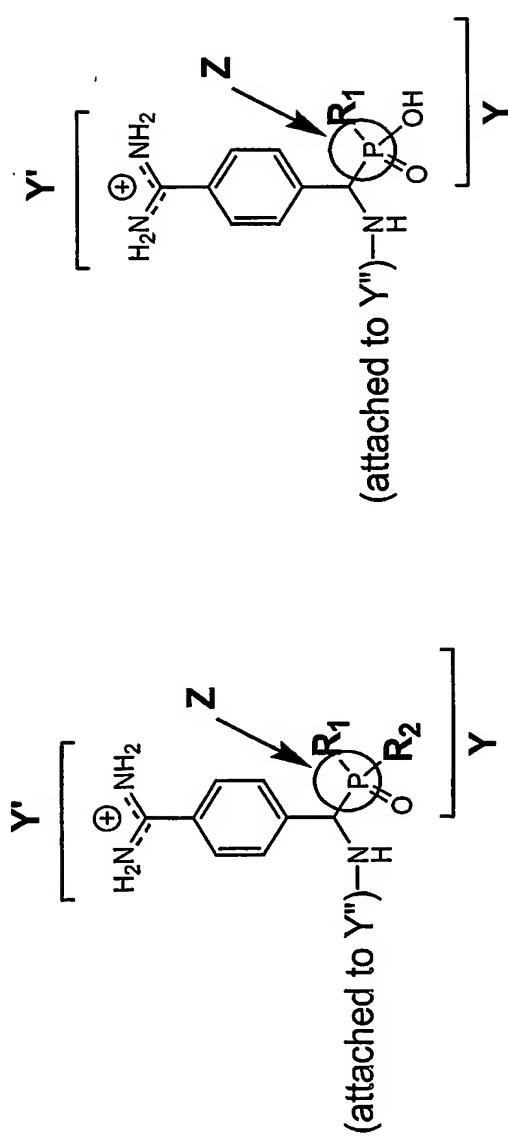


**•  $L'-Y''-Y'-Y$ , Example 1**



**•  $L'-Y''-Y'-Y$ , Example 2**



**Fig 5A**

pCRA Z-R pair: Example 1

pCRA Z-R pair: Example 2

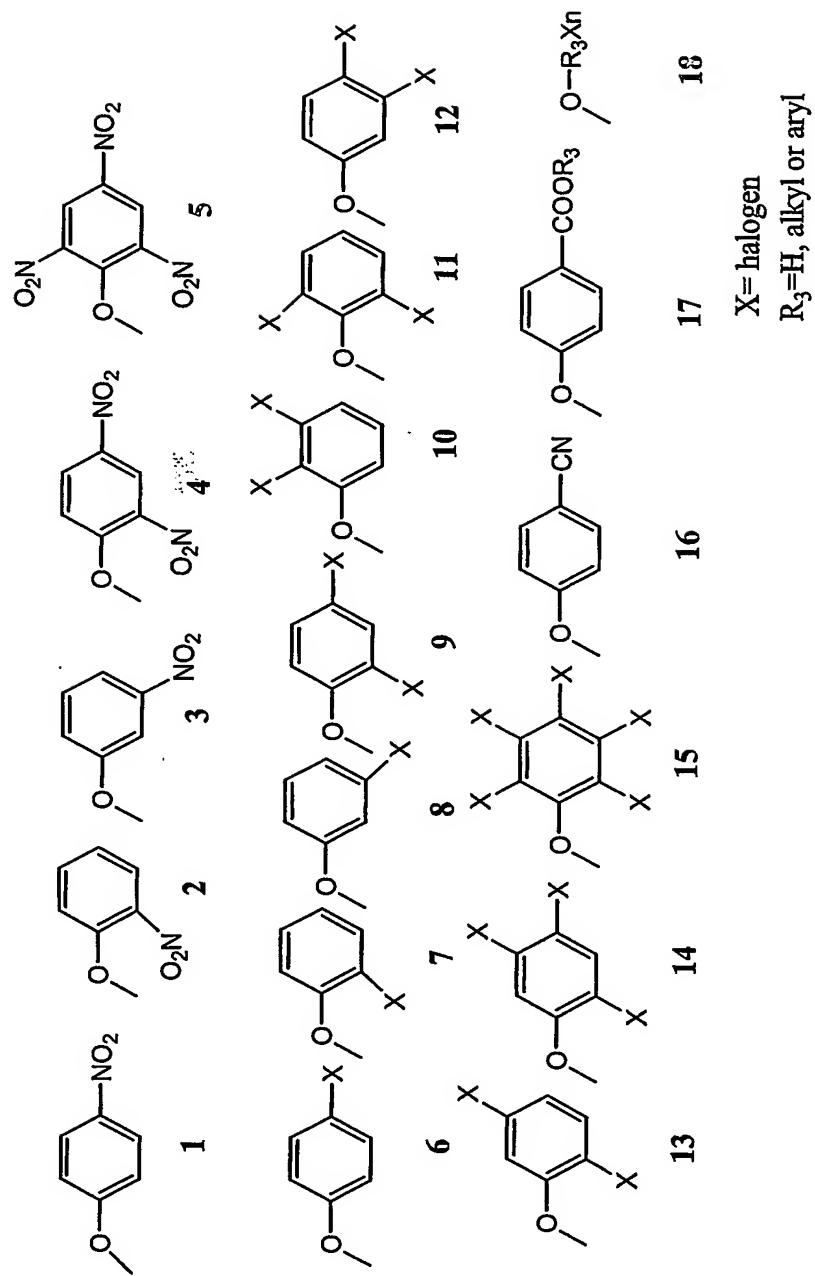


Fig 5B

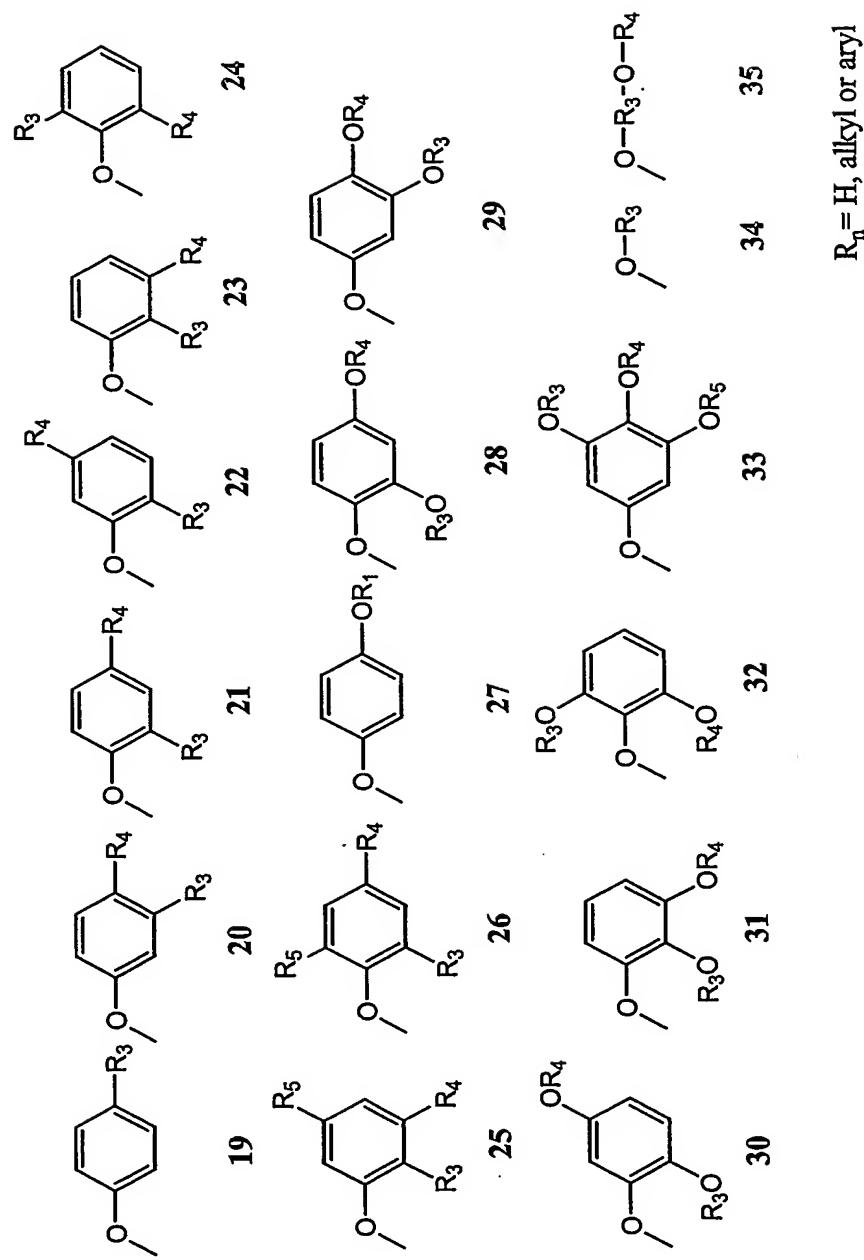
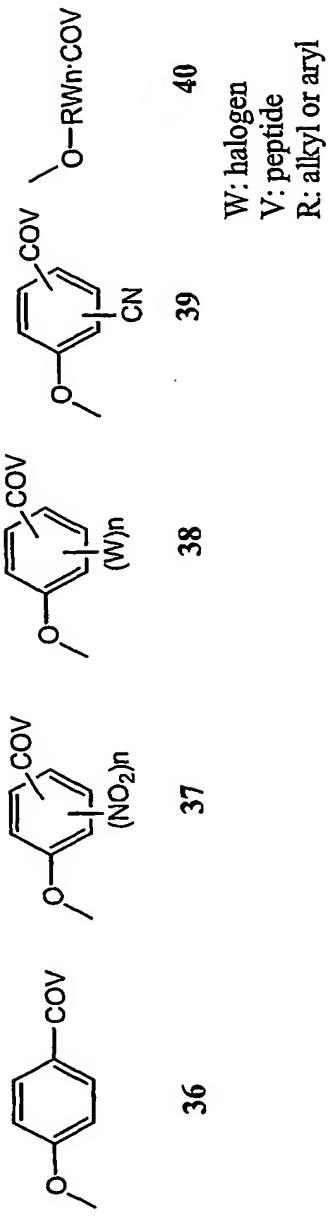


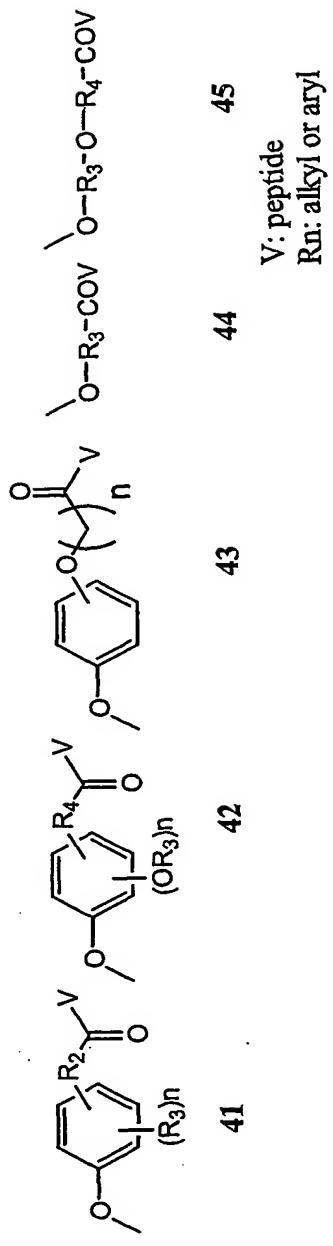
Fig 5C

5D  
Fig

### A. Electron withdrawing substituents with peptide extension



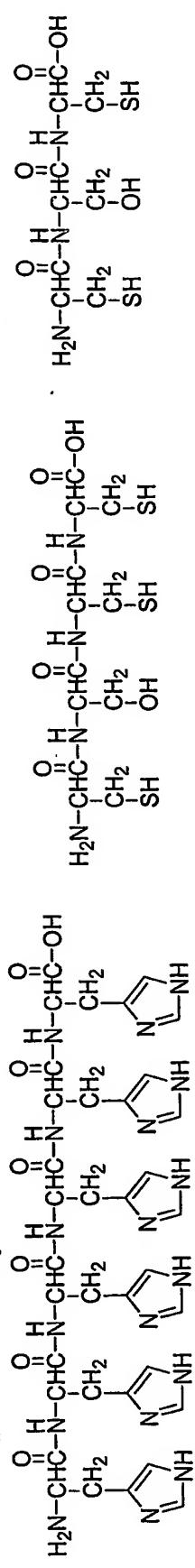
## B. Electron donating substituents with peptide extension



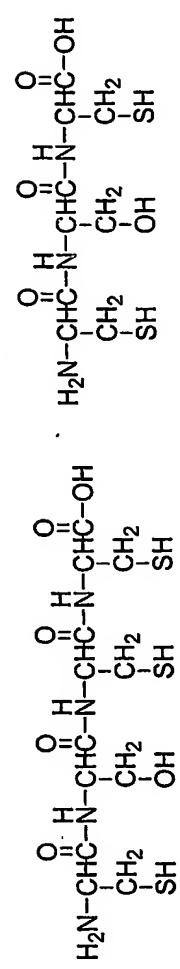
**Selected examples of metal binding moiety**

1. (His)<sub>n</sub>
2. (Cys-Aaa-Cys-Cys): metallothionein  $\alpha$ -domain-derived peptide
3. (Cys-Aaa-Cys): metallothionein  $\beta$ -domain-derived peptide
4. EDTA
5. a crown ether
6. DAMP

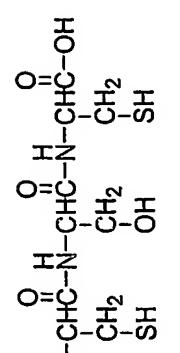
**Example of 1: (His)<sub>6</sub>**



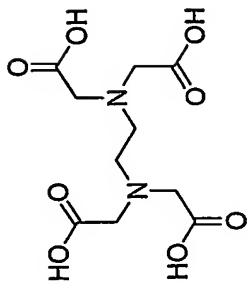
**Example of 2: Cys-Ser-Cys-Cys**



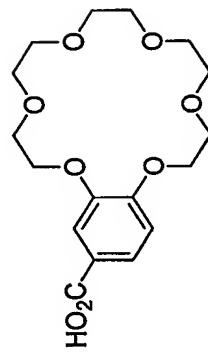
**Example of 3: Cys-Ser-Cys**



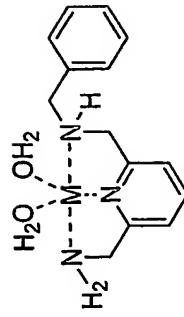
**Example of 4: EDTA**



**Example of 5: 4'-Carboxybenzo-18-crown-6**



**Example of 6: DAMP**



**Fig 6**

Fig. 7

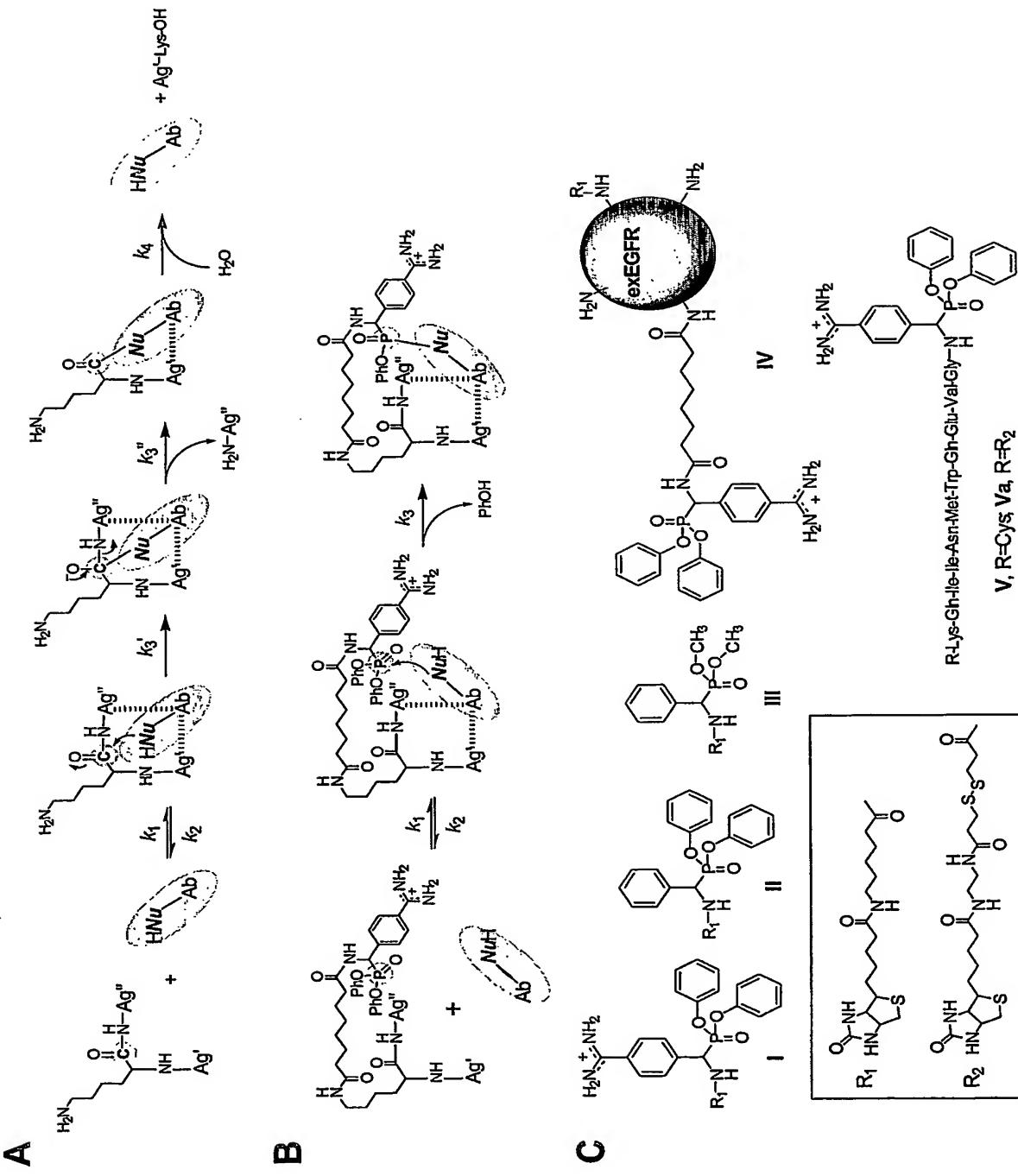
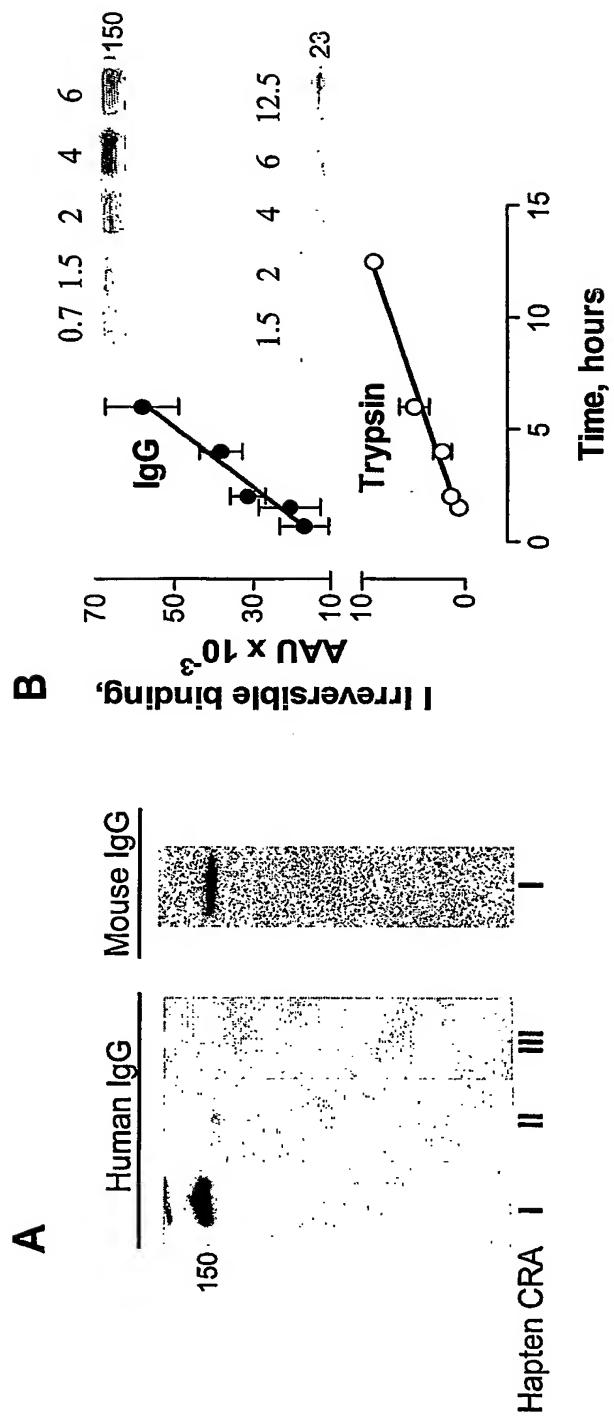


Fig. 8



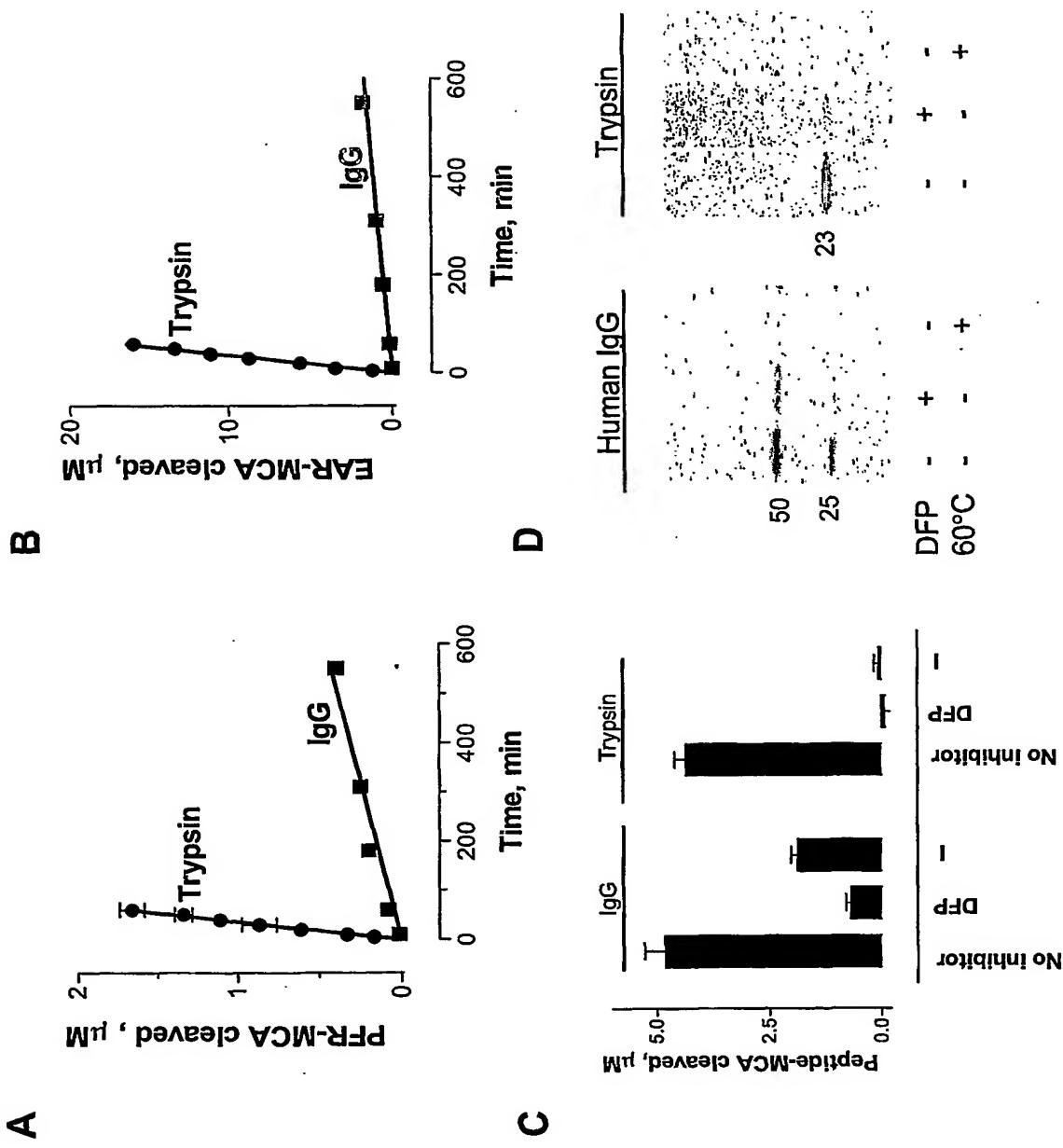


Fig. 9

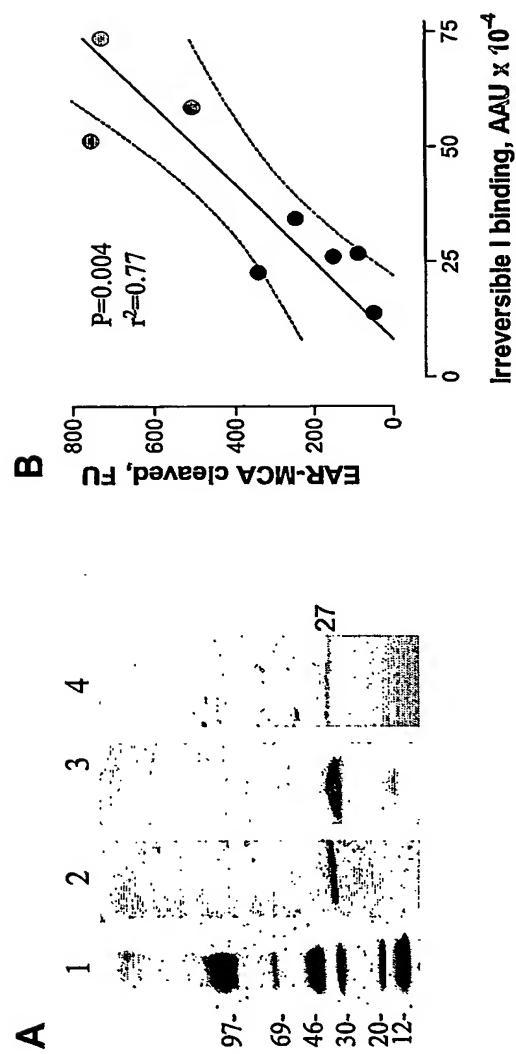


Fig. 10

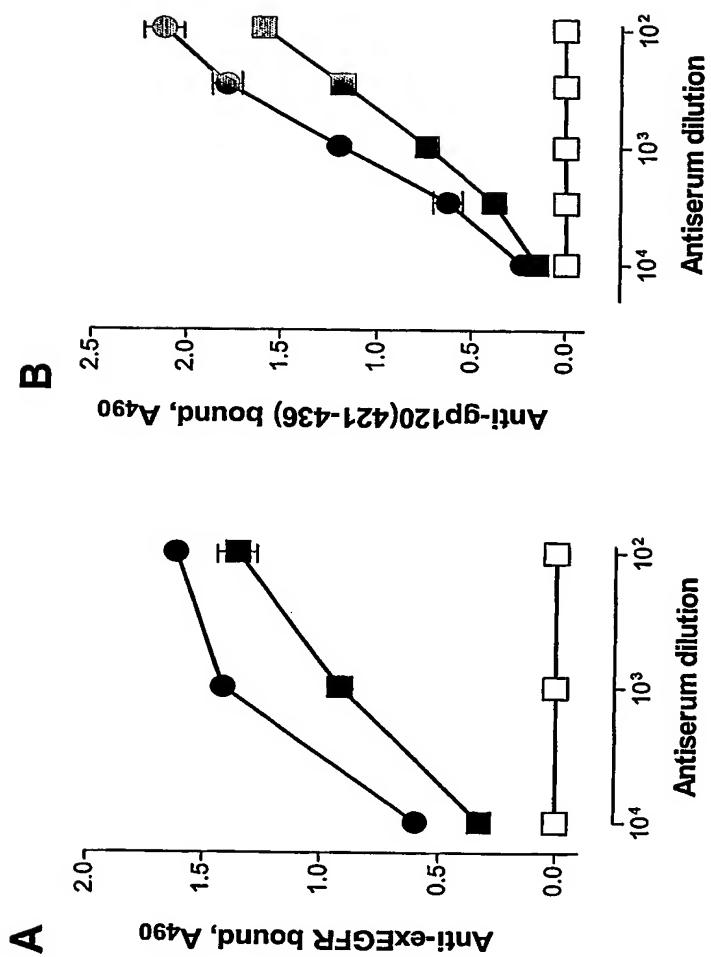


Fig 11

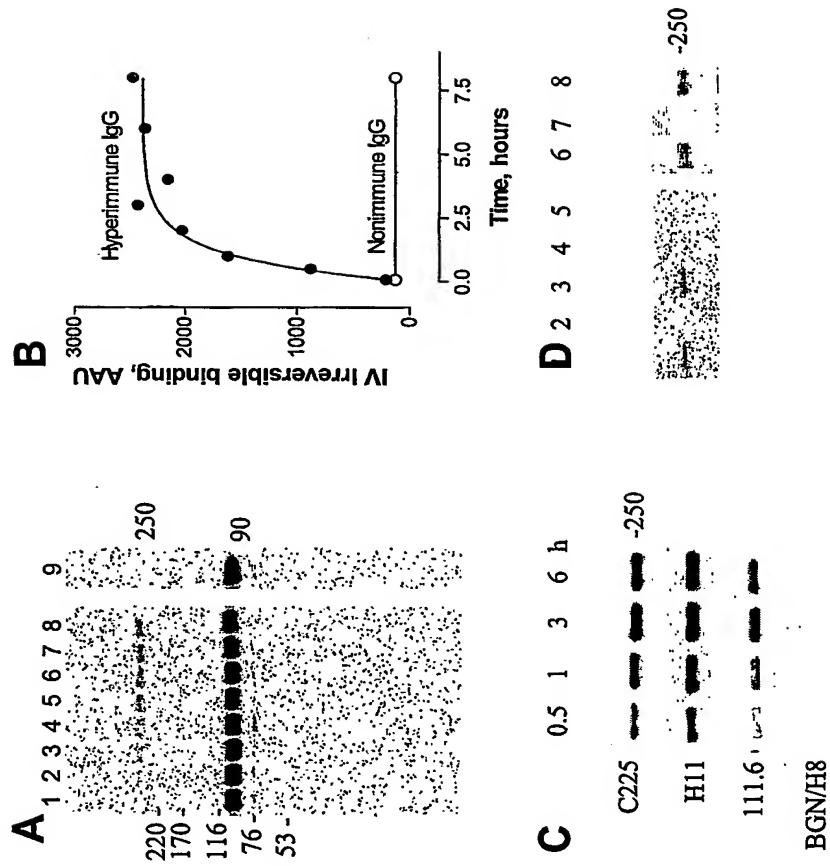


Fig 12

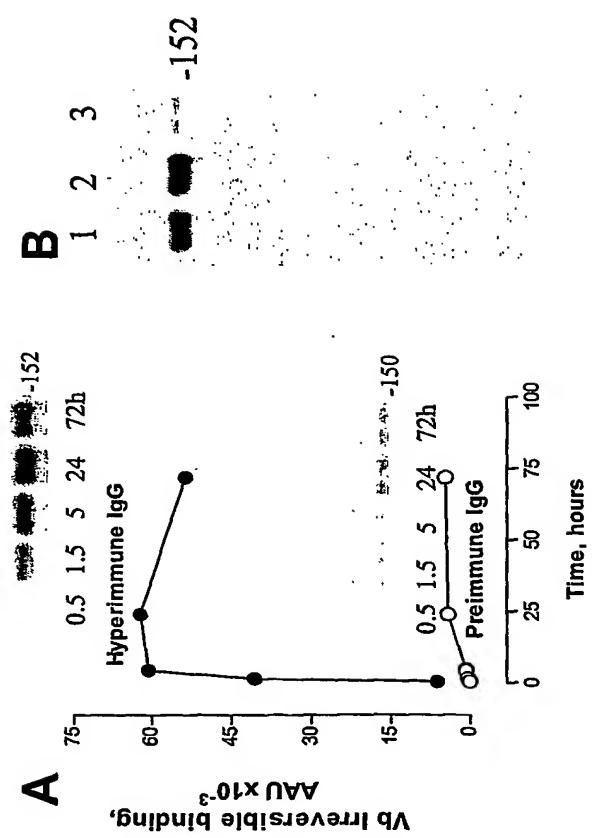
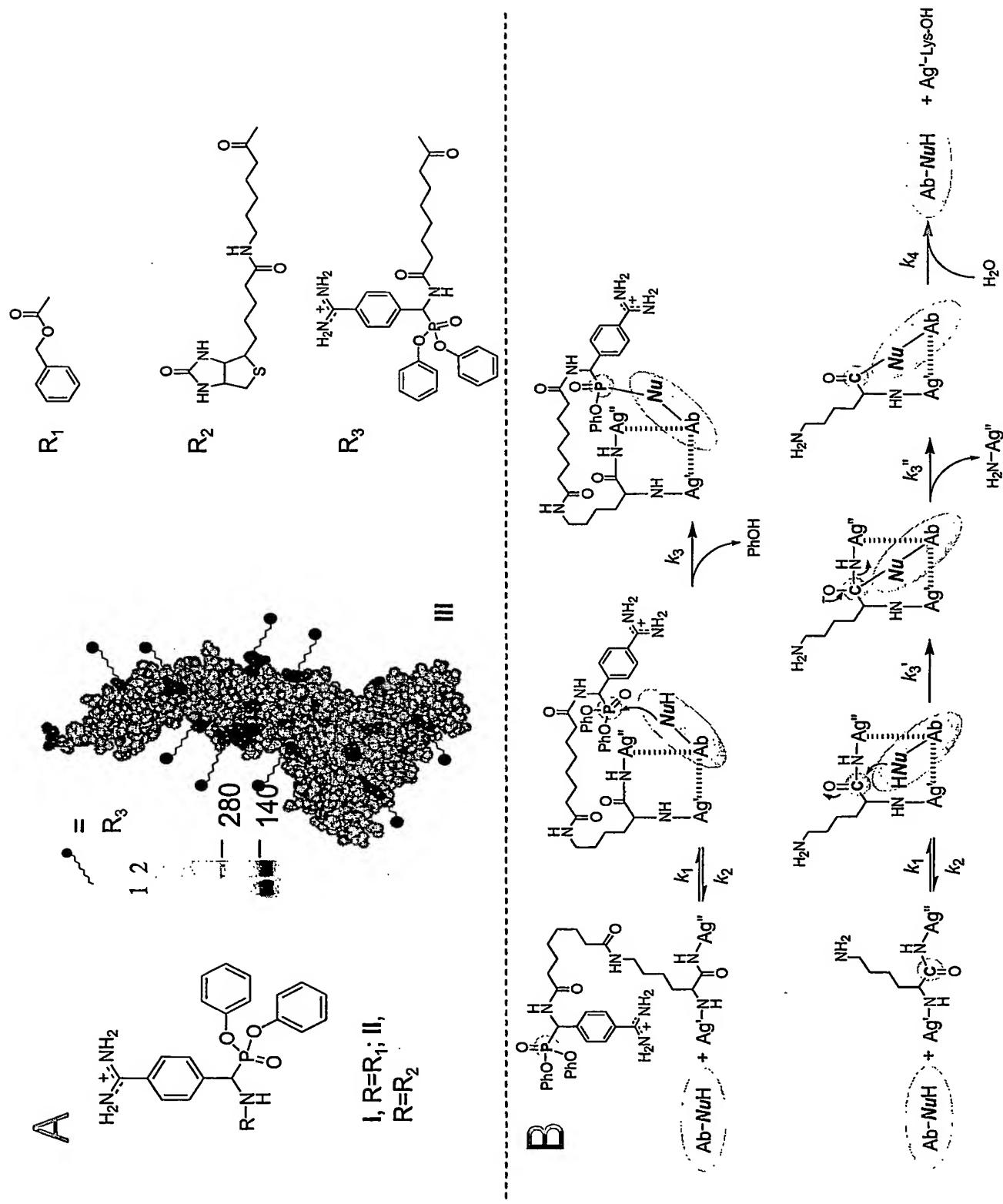


Fig 13

Fig 14



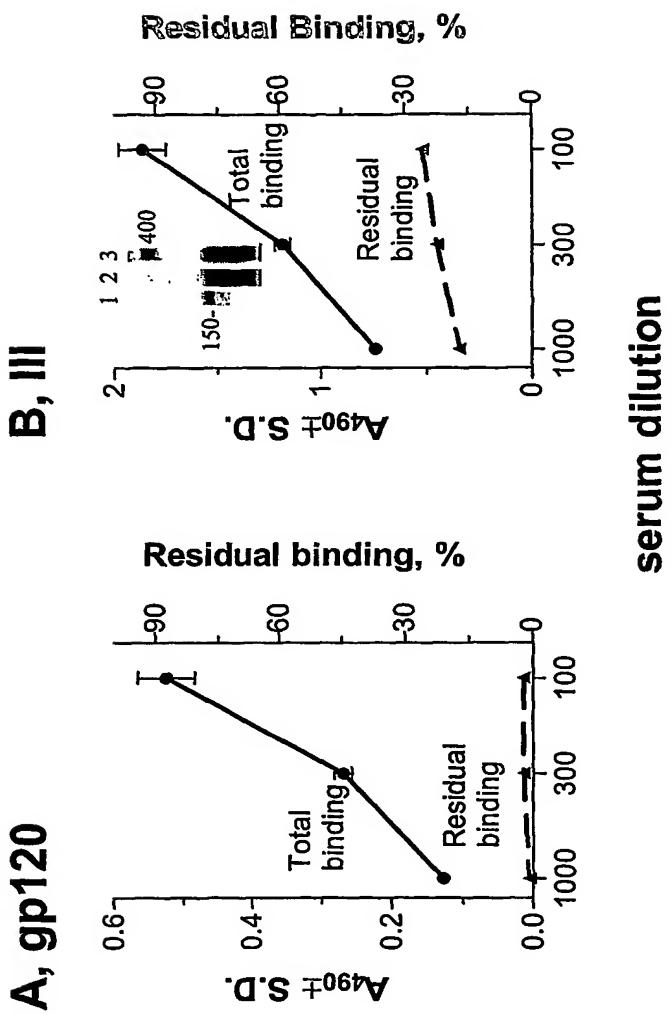
**Fig 15**

Fig 16

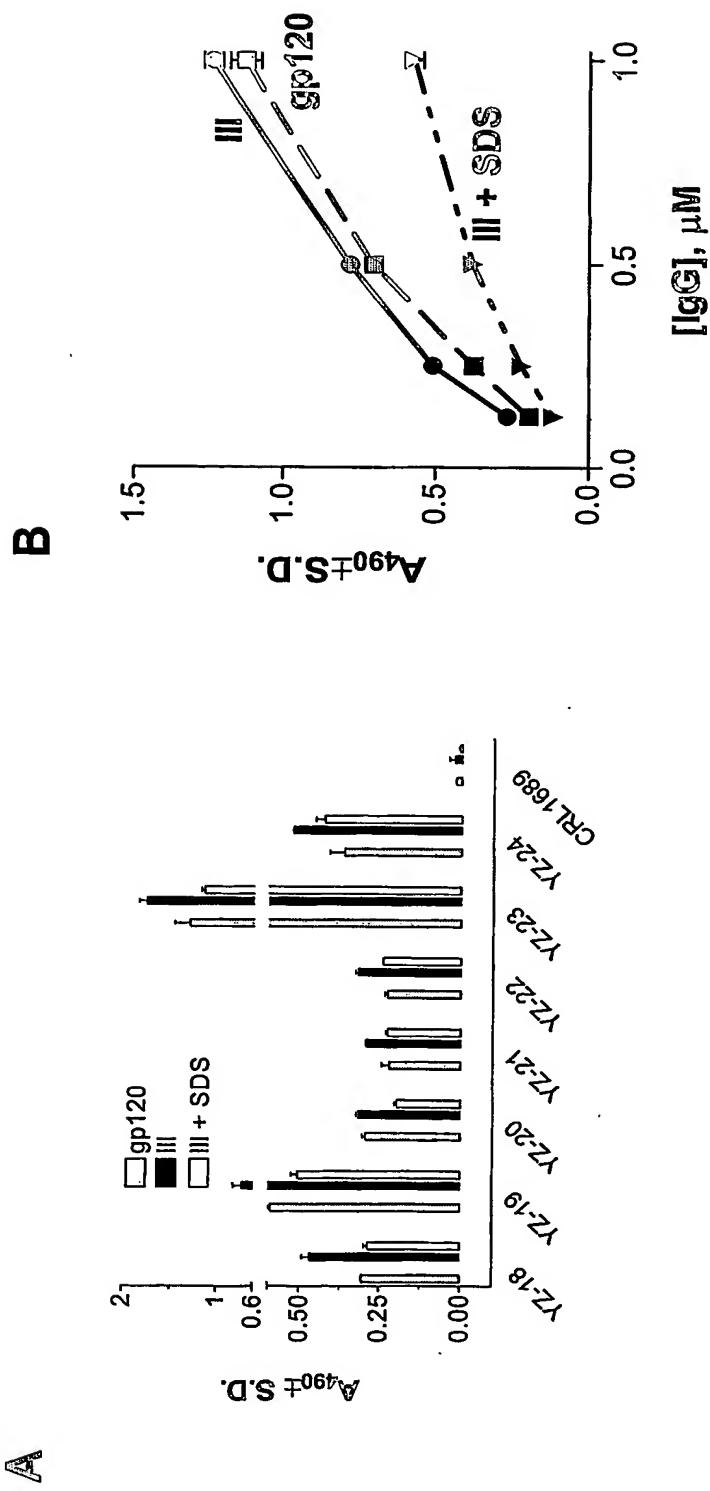
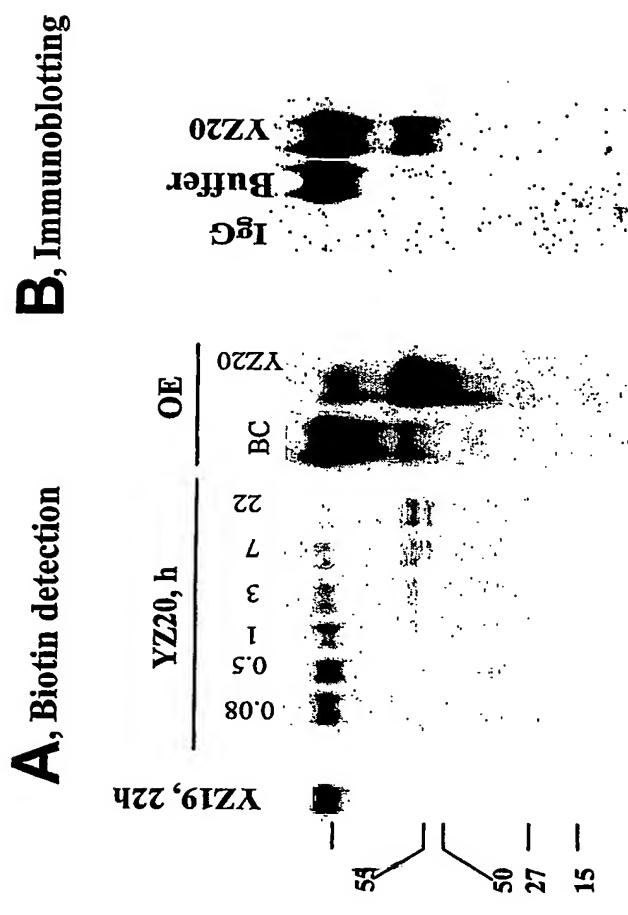


Fig 17



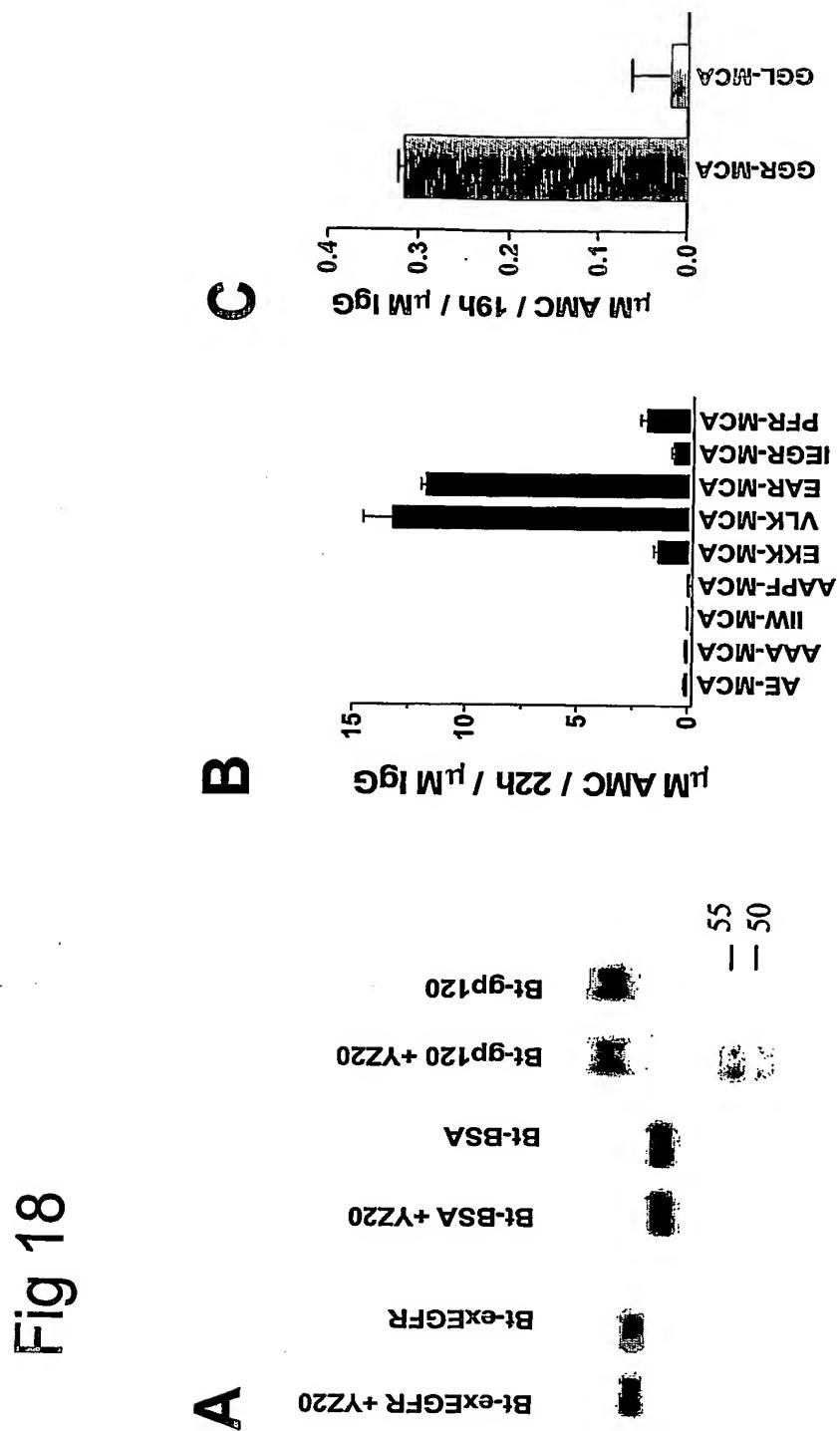


Fig 18

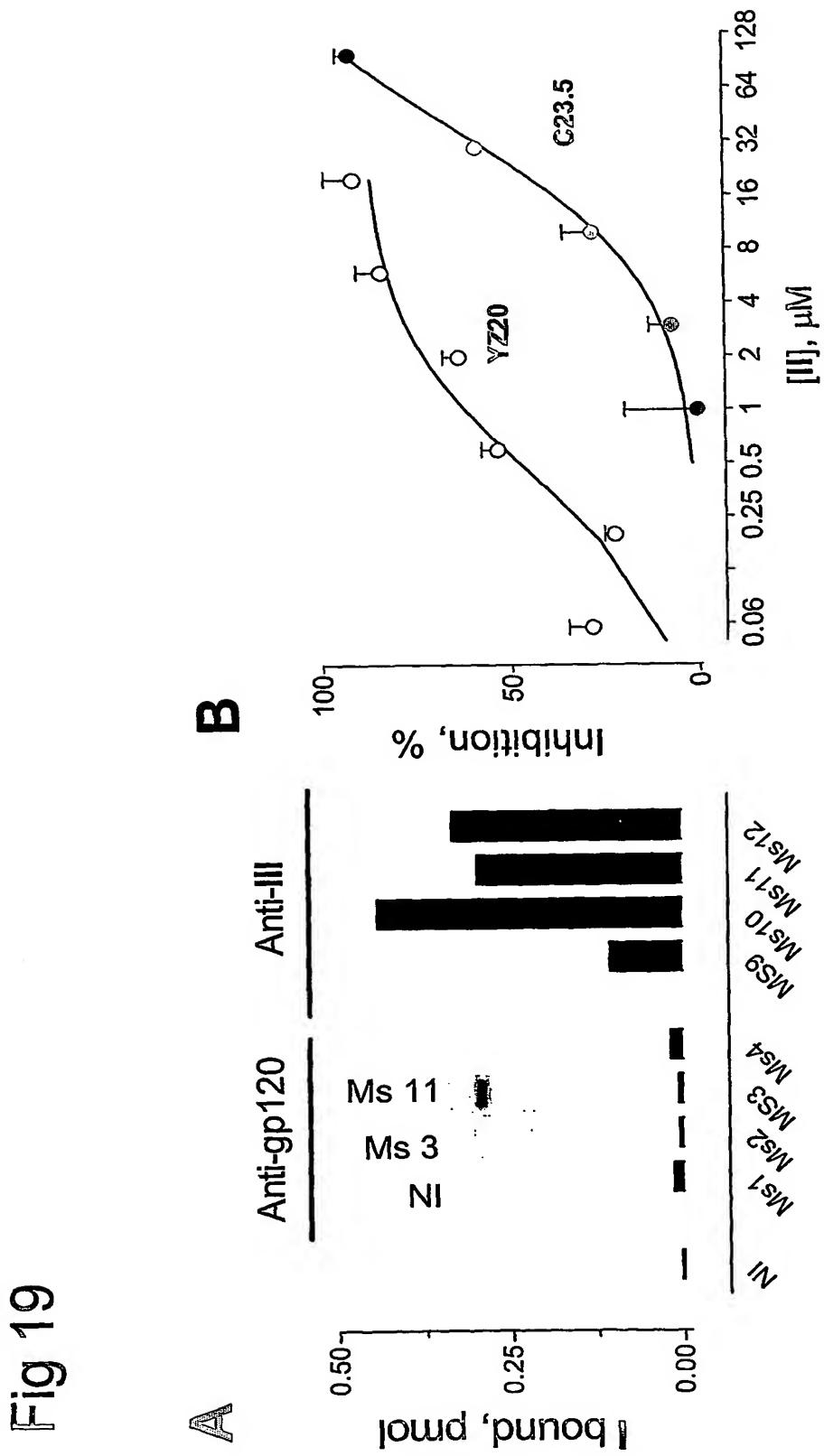
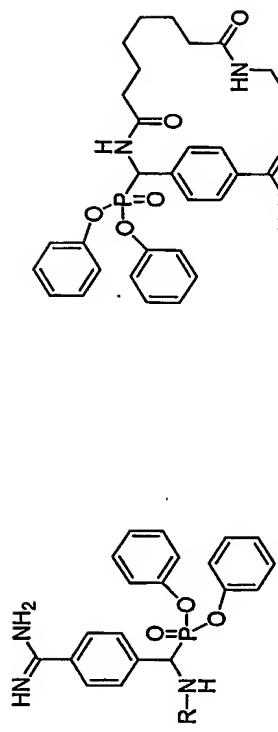


Fig 19

Fig 20

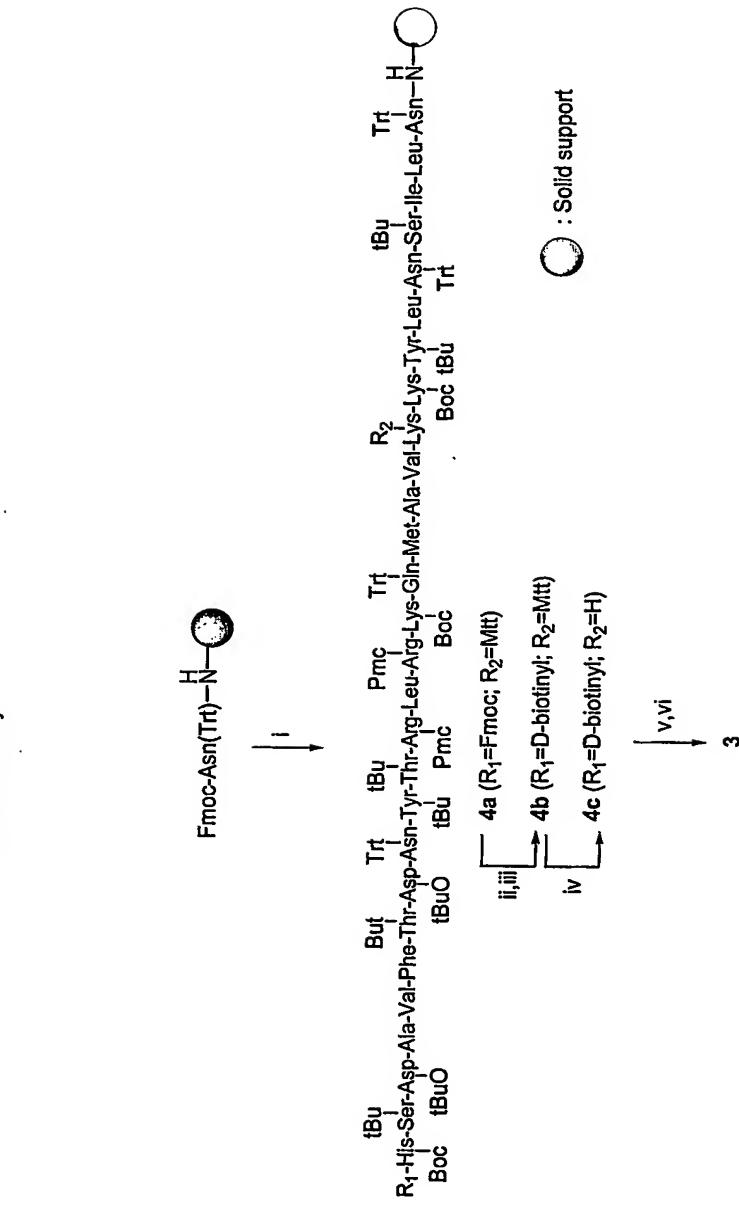
A



1: R = 6-(D-biotinamido)hexanoyl  
2: R = O-succinimidylsoburyl

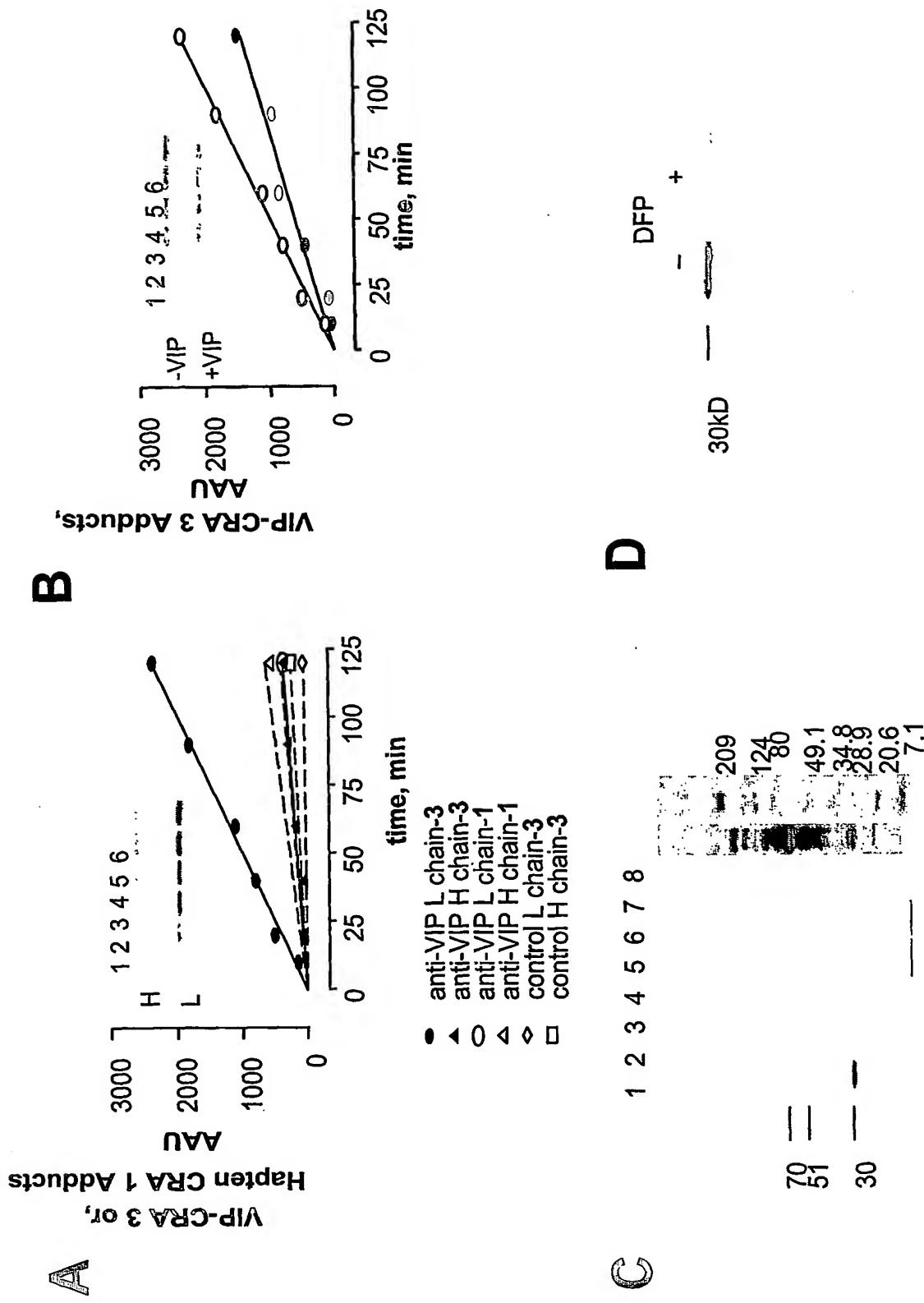
R-His-Ser-Asp-Ala-Val-Phe-Thr-Asp-Asn-Tyr-Thr-Arg-Lys-Gln-Met-Ala-Val-Lys-Tyr-Leu-Asn-Ser-Ile-Leu-Asn-NH<sub>2</sub>

3: R = D-biotinyl



B

Fig 21



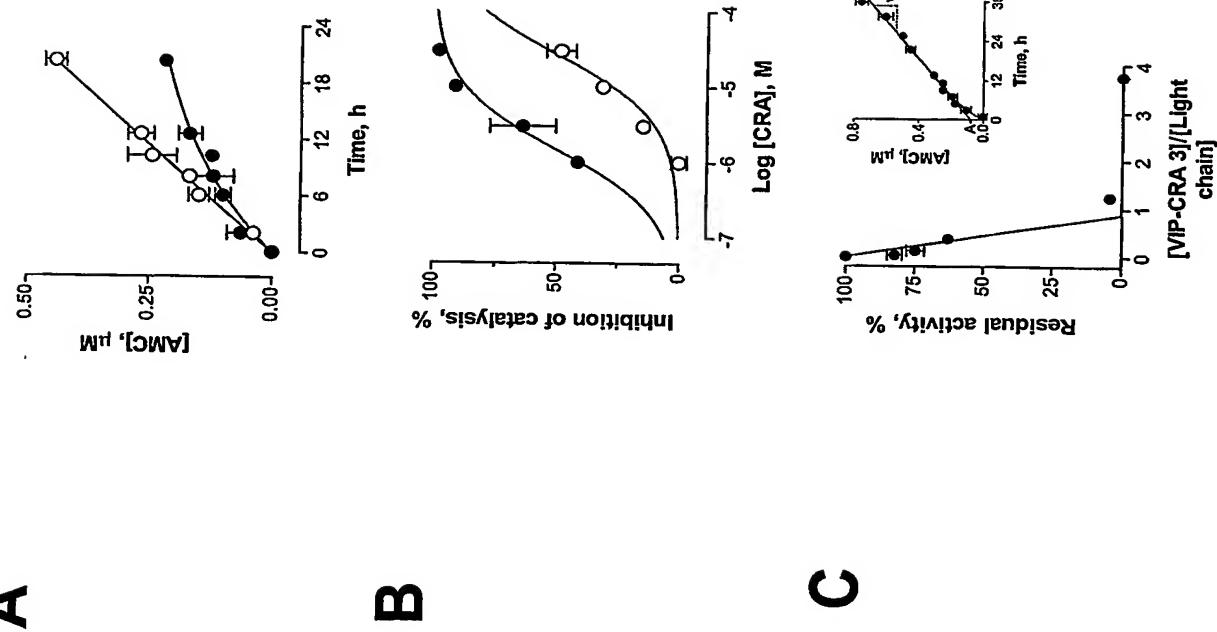


Fig 22

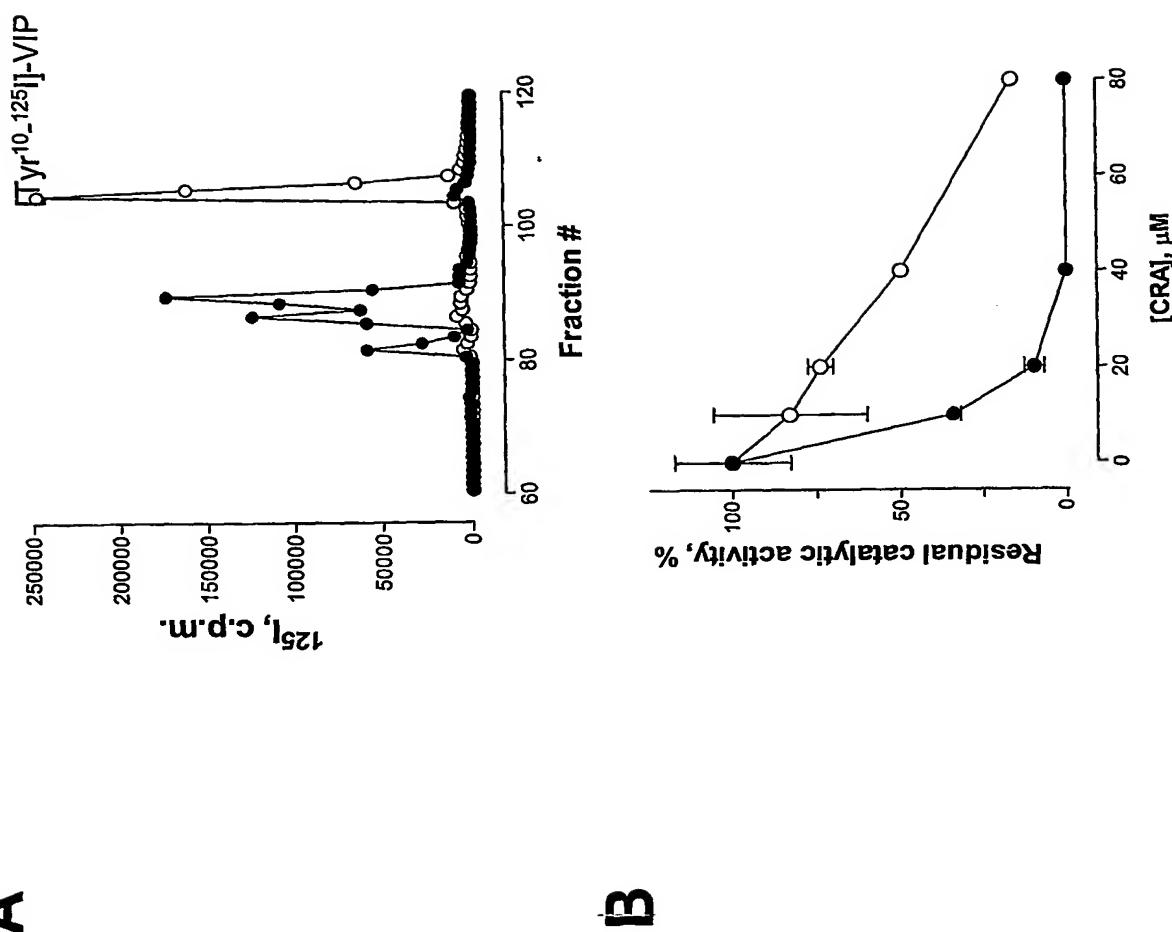
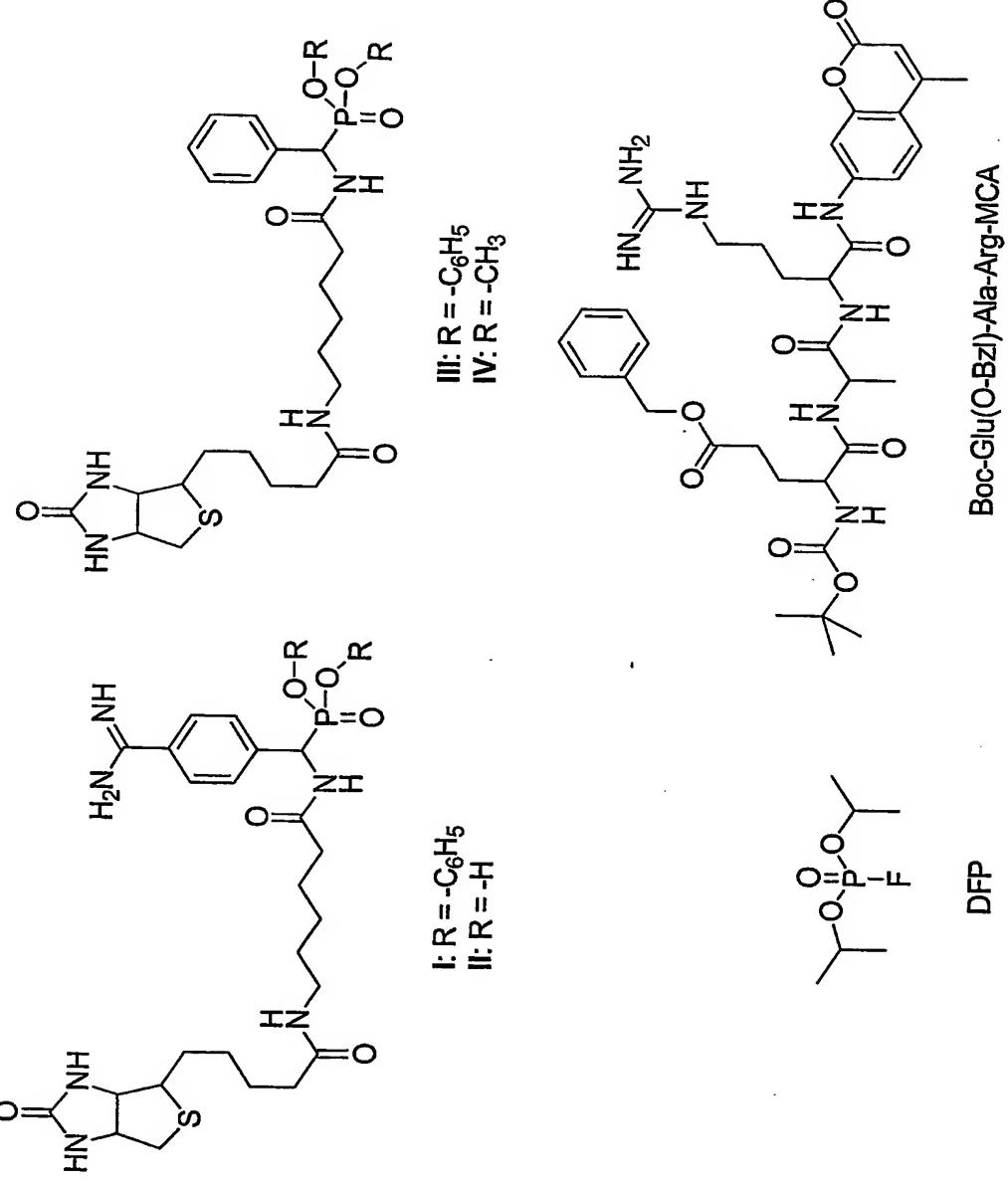


Fig 23

Fig 24



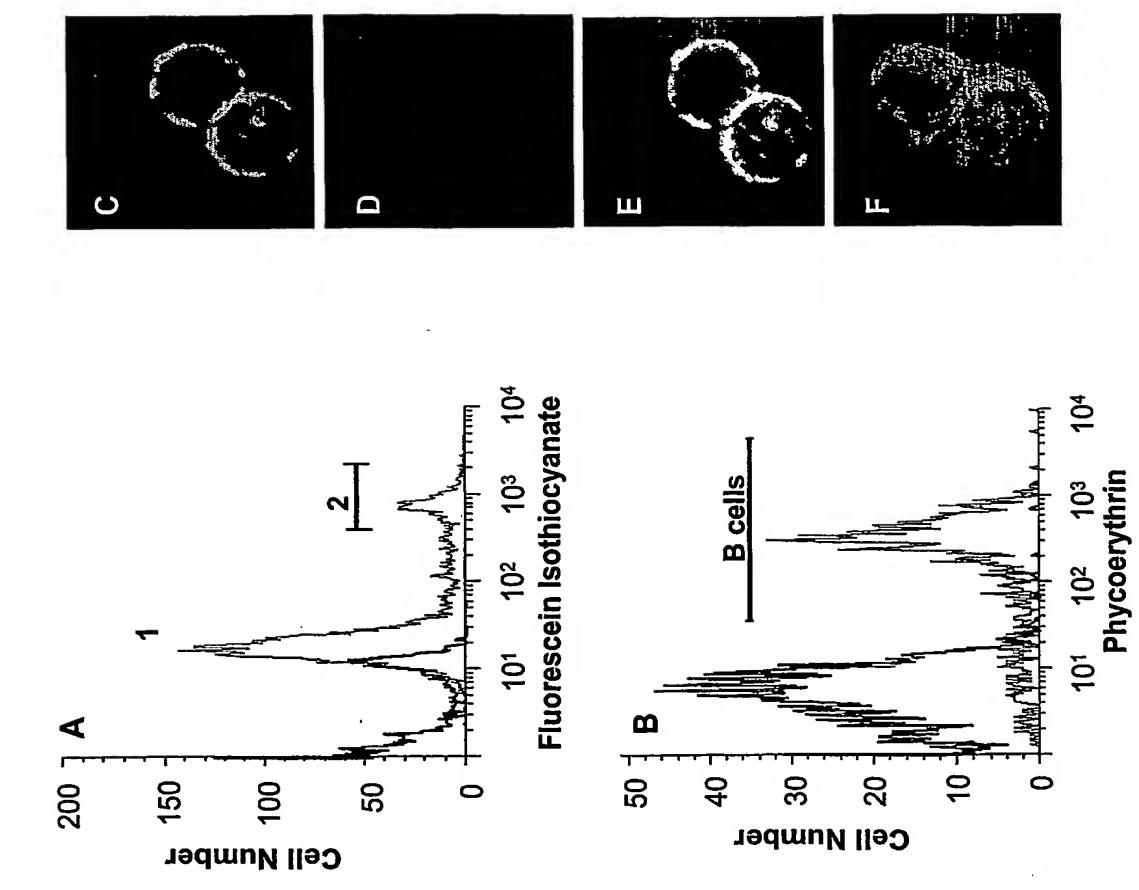


Fig 25

Fig 26

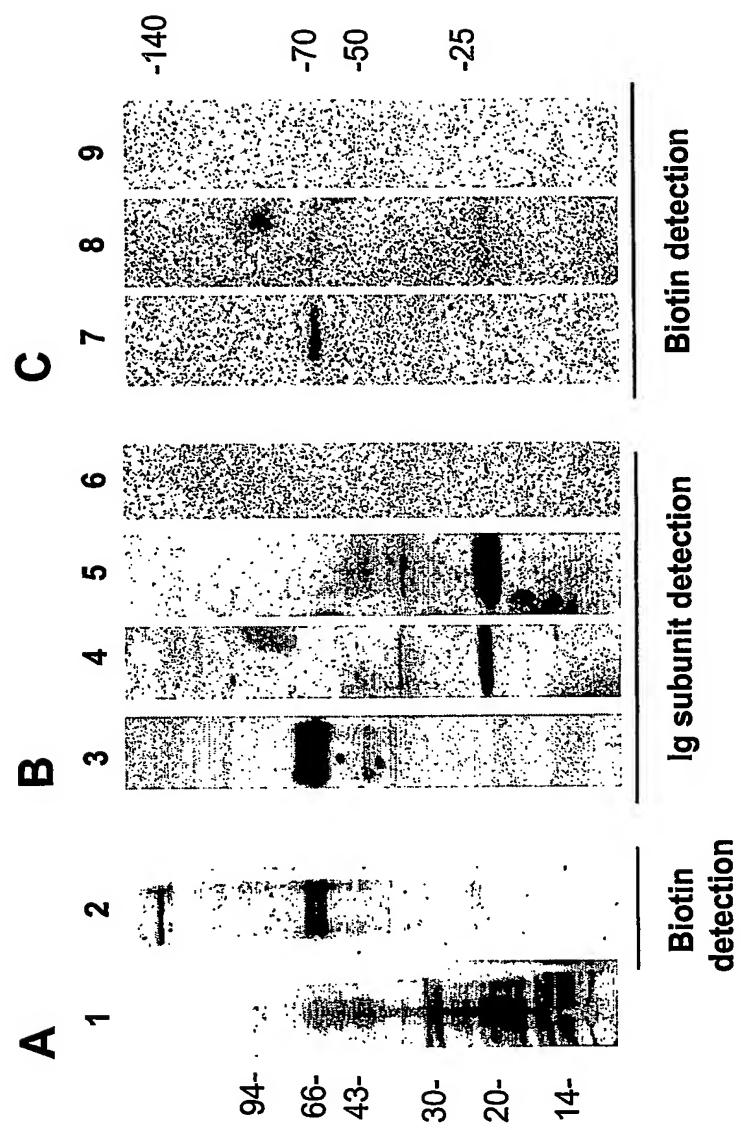


Fig 27

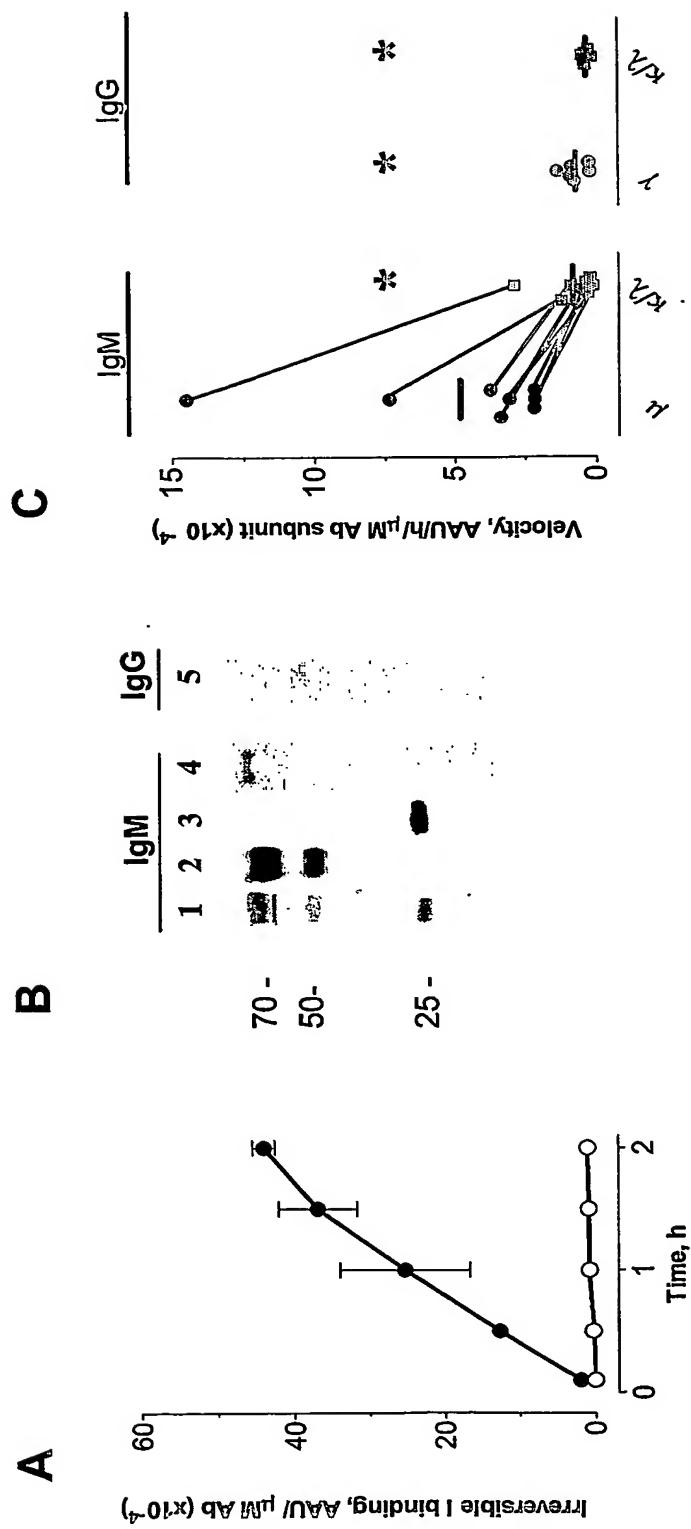
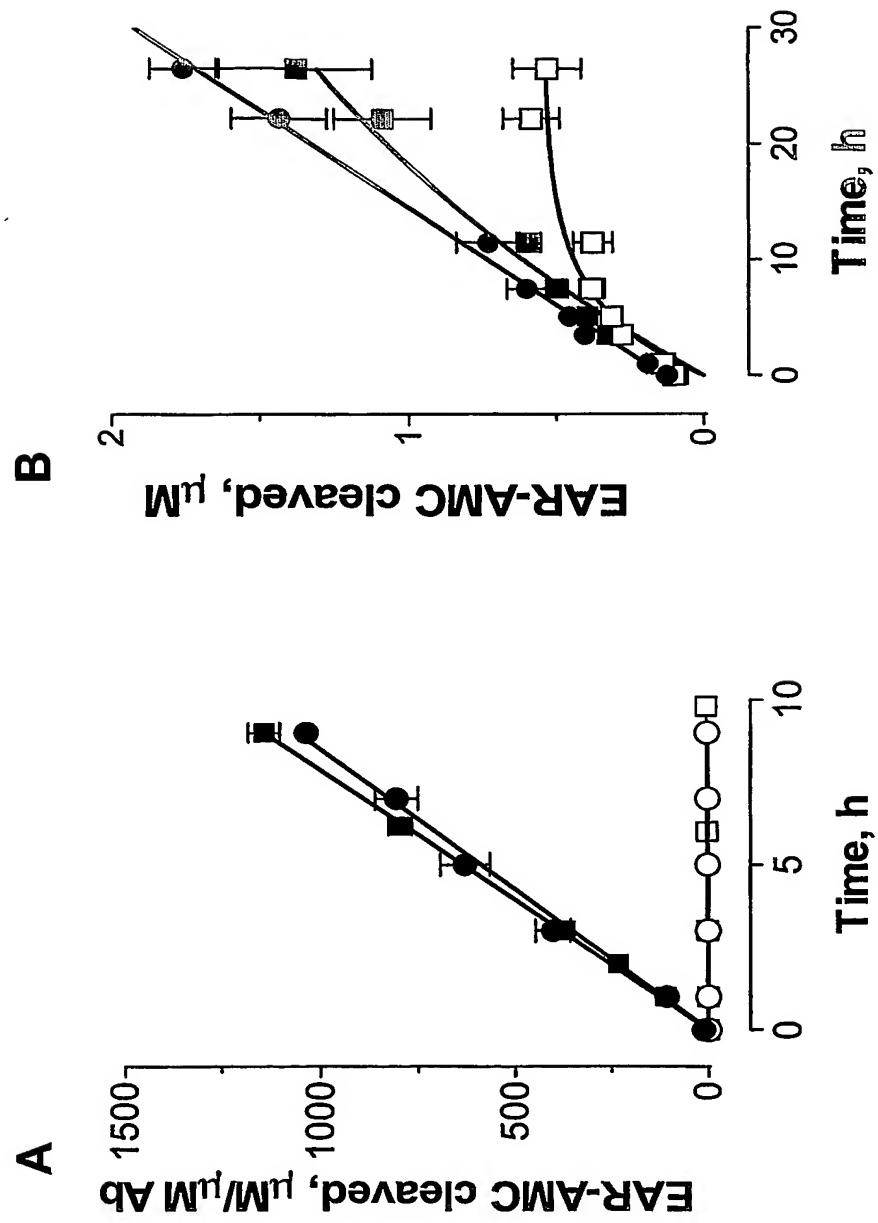
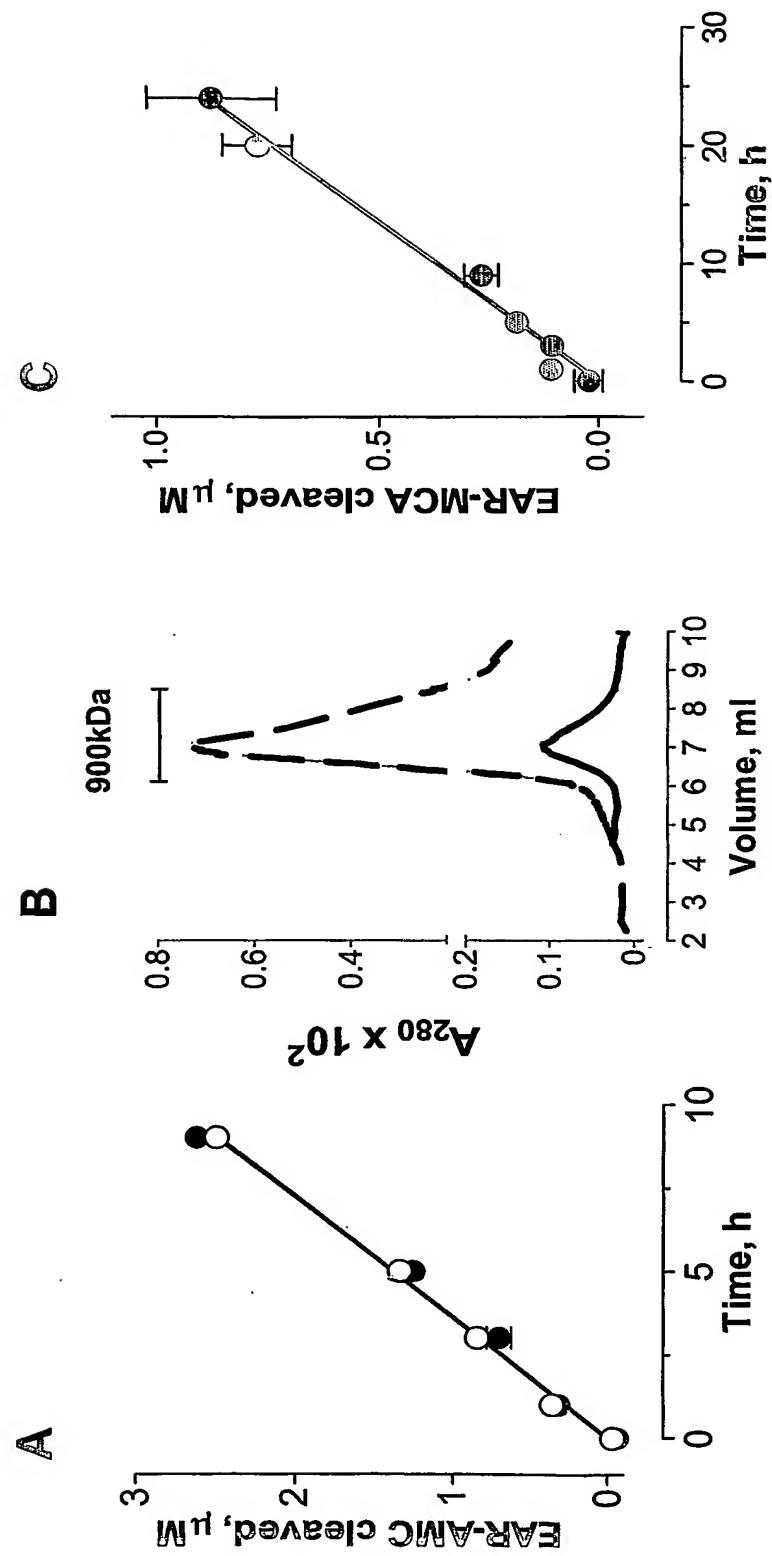


Fig 28



**Fig 29**

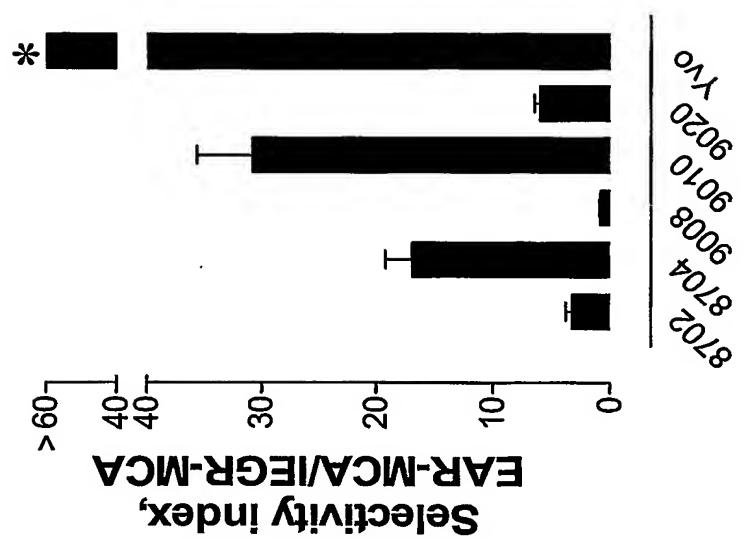


Fig 30

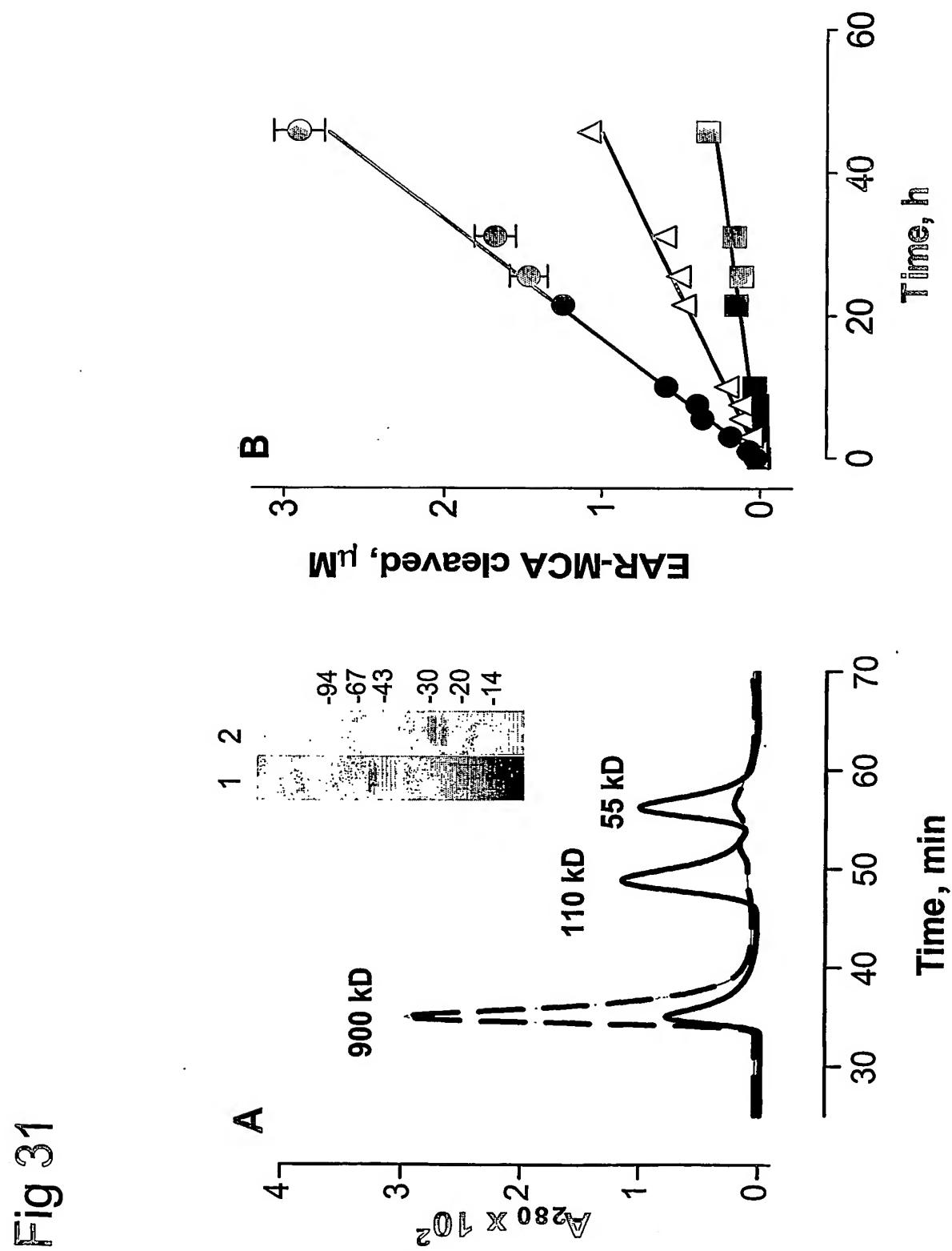
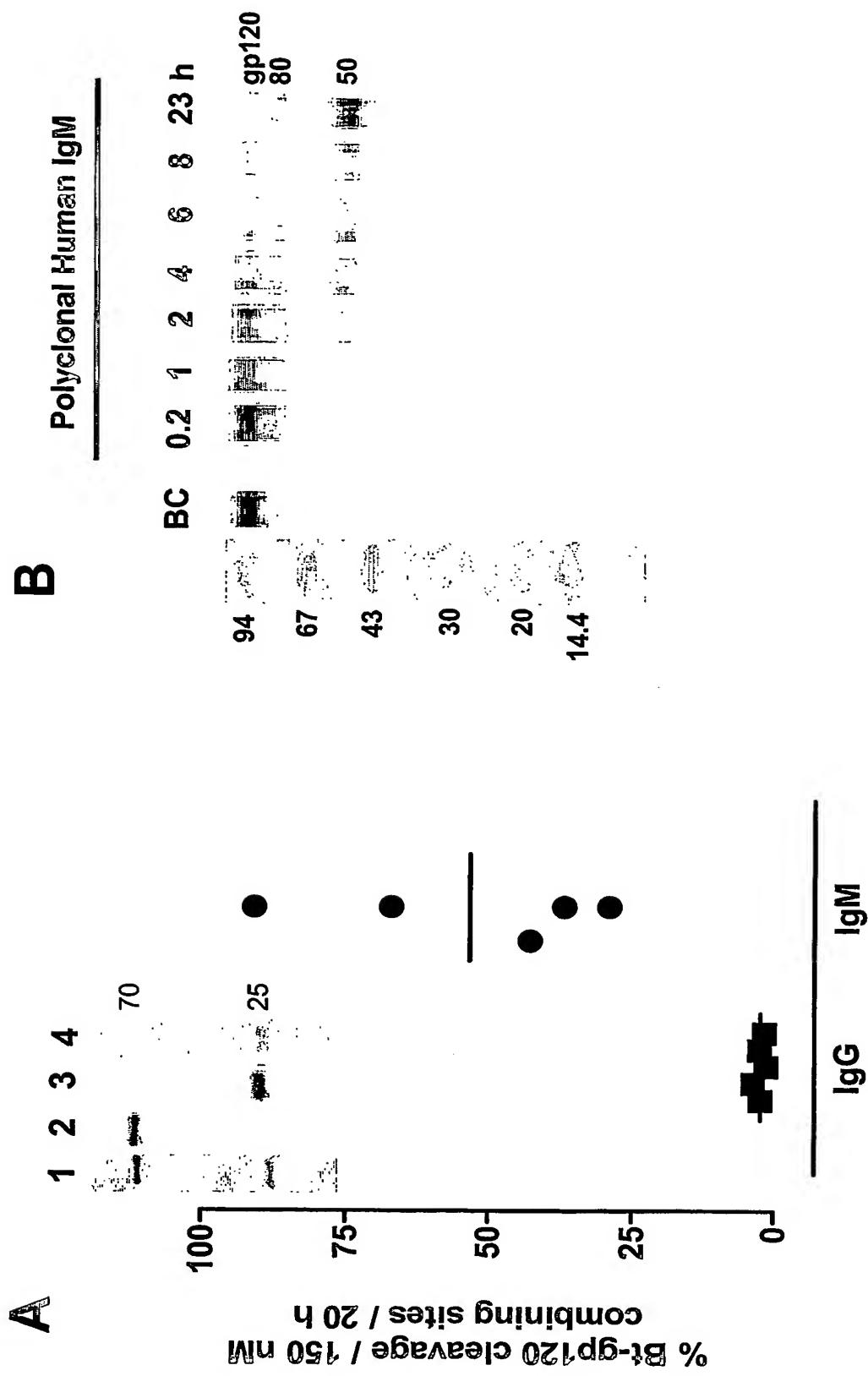


Fig 32



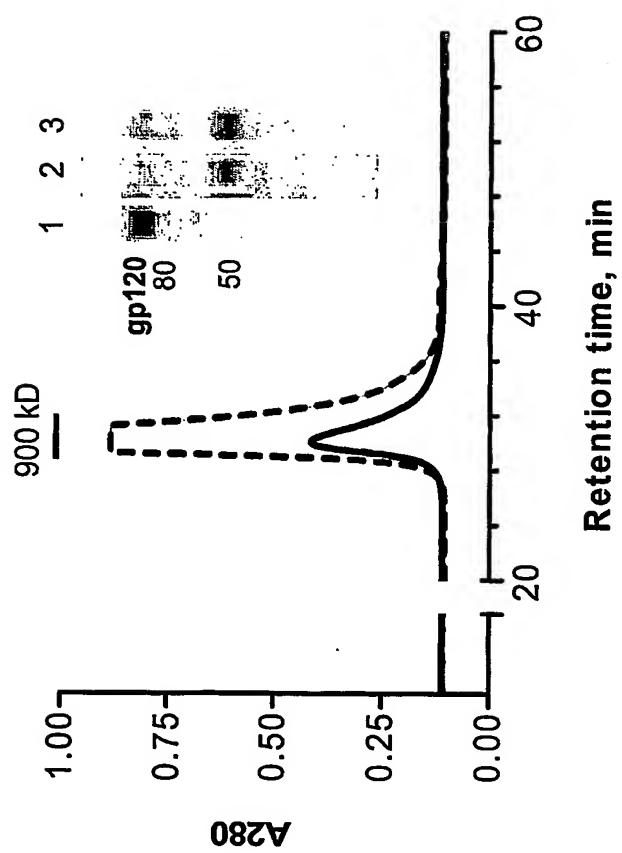


Fig 33

Fig 34

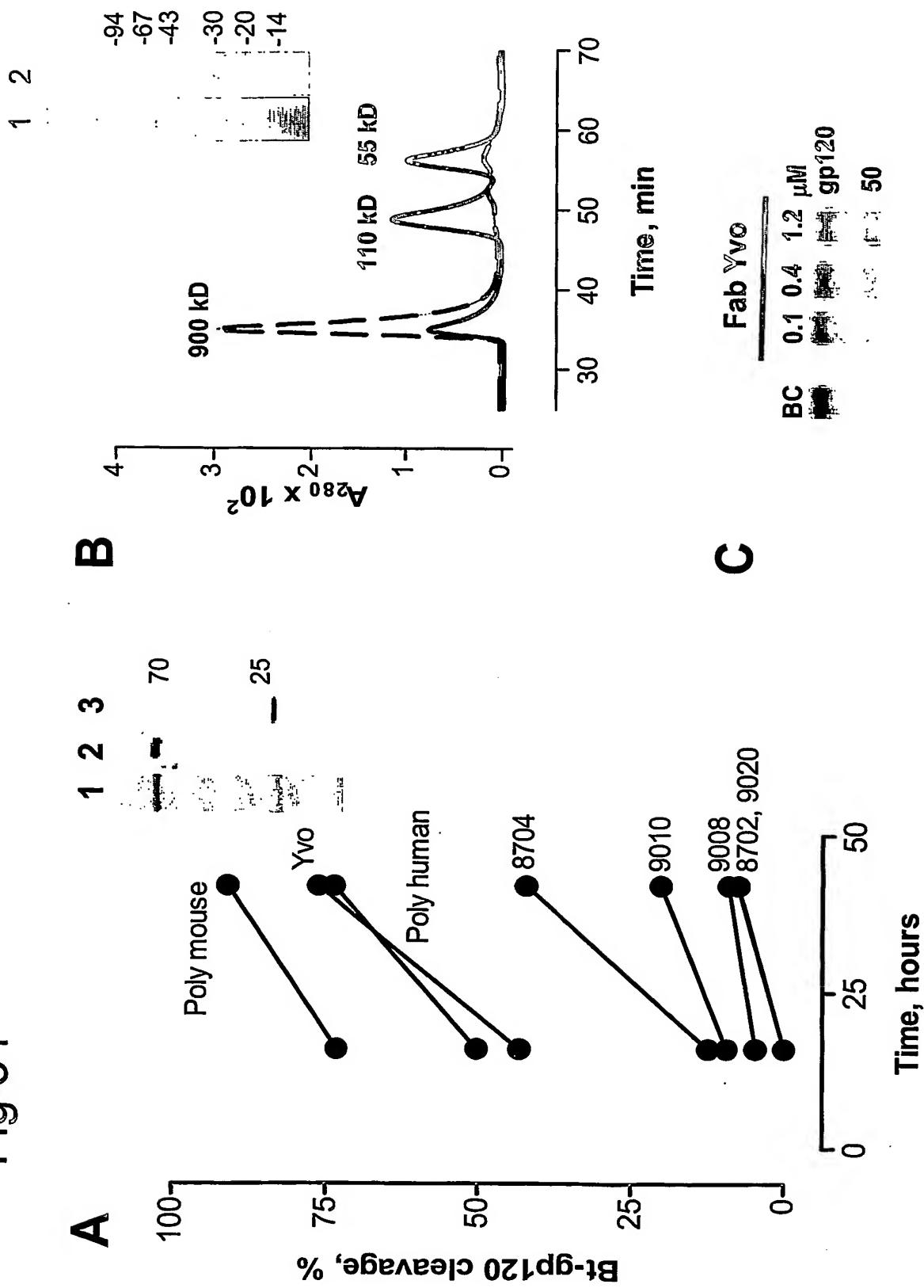
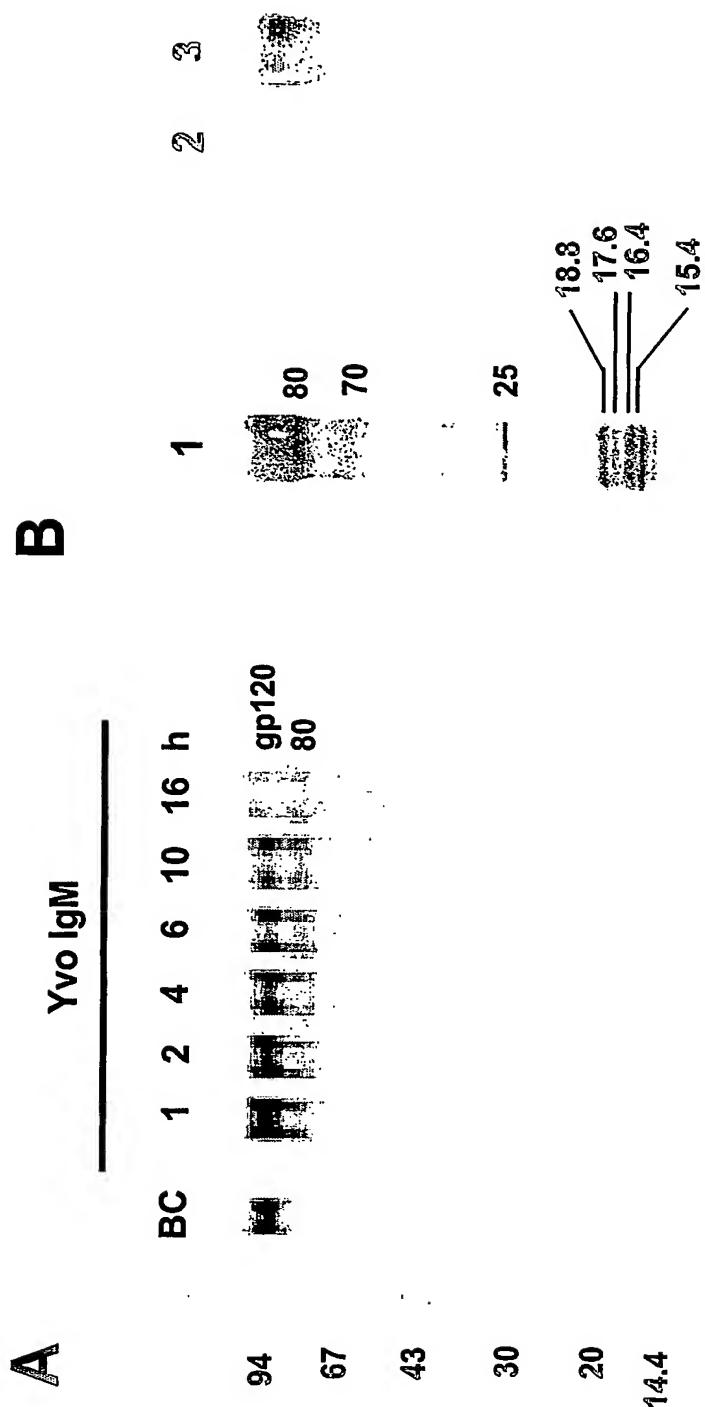


Fig 35



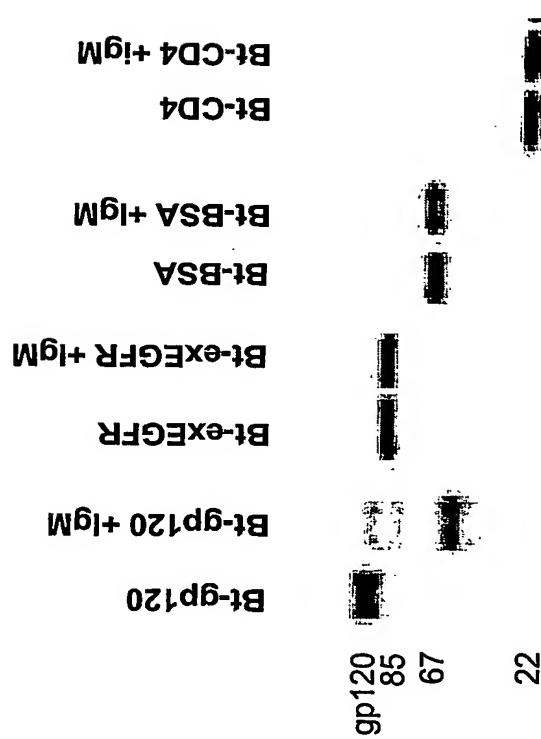


Fig 36

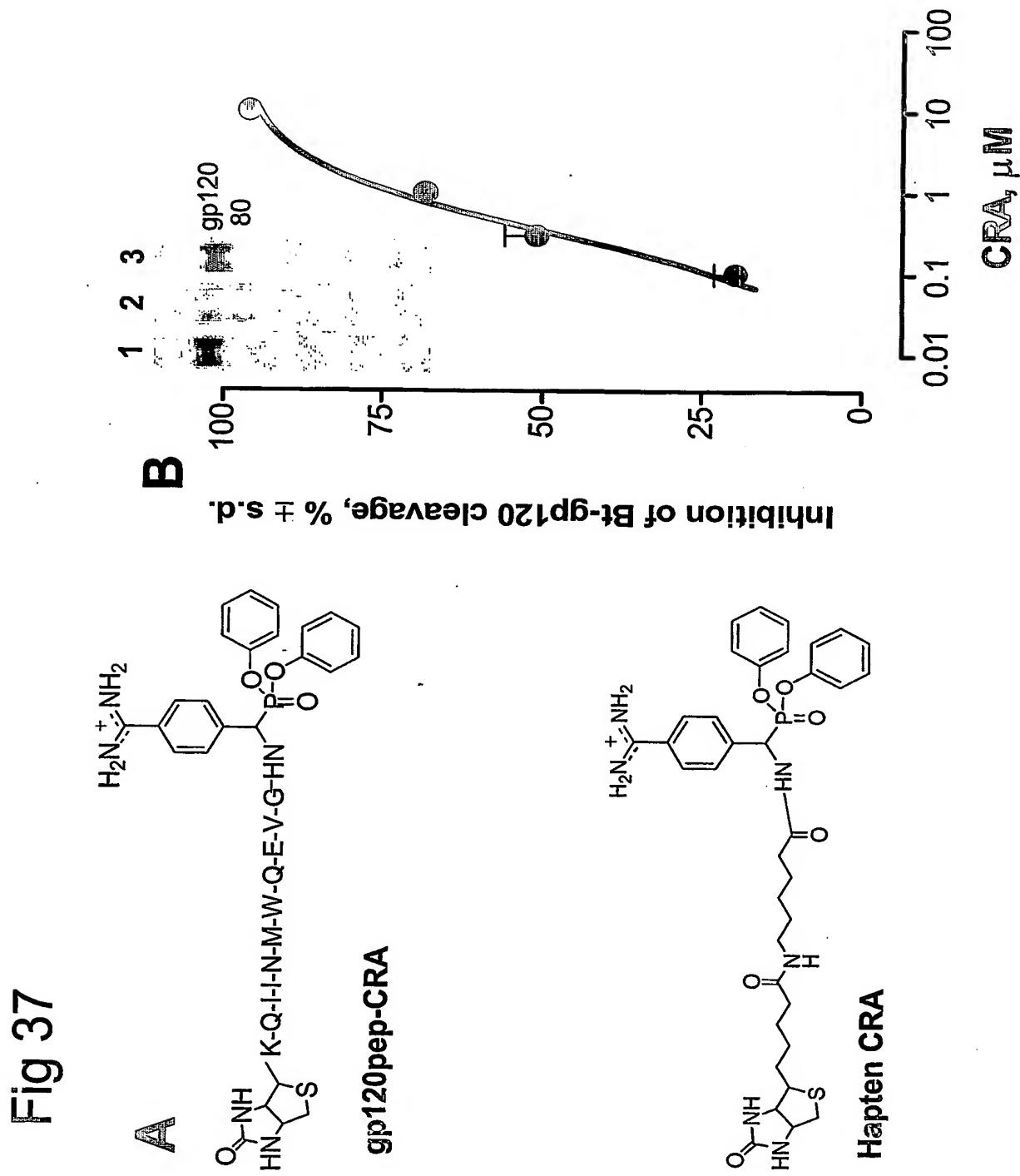
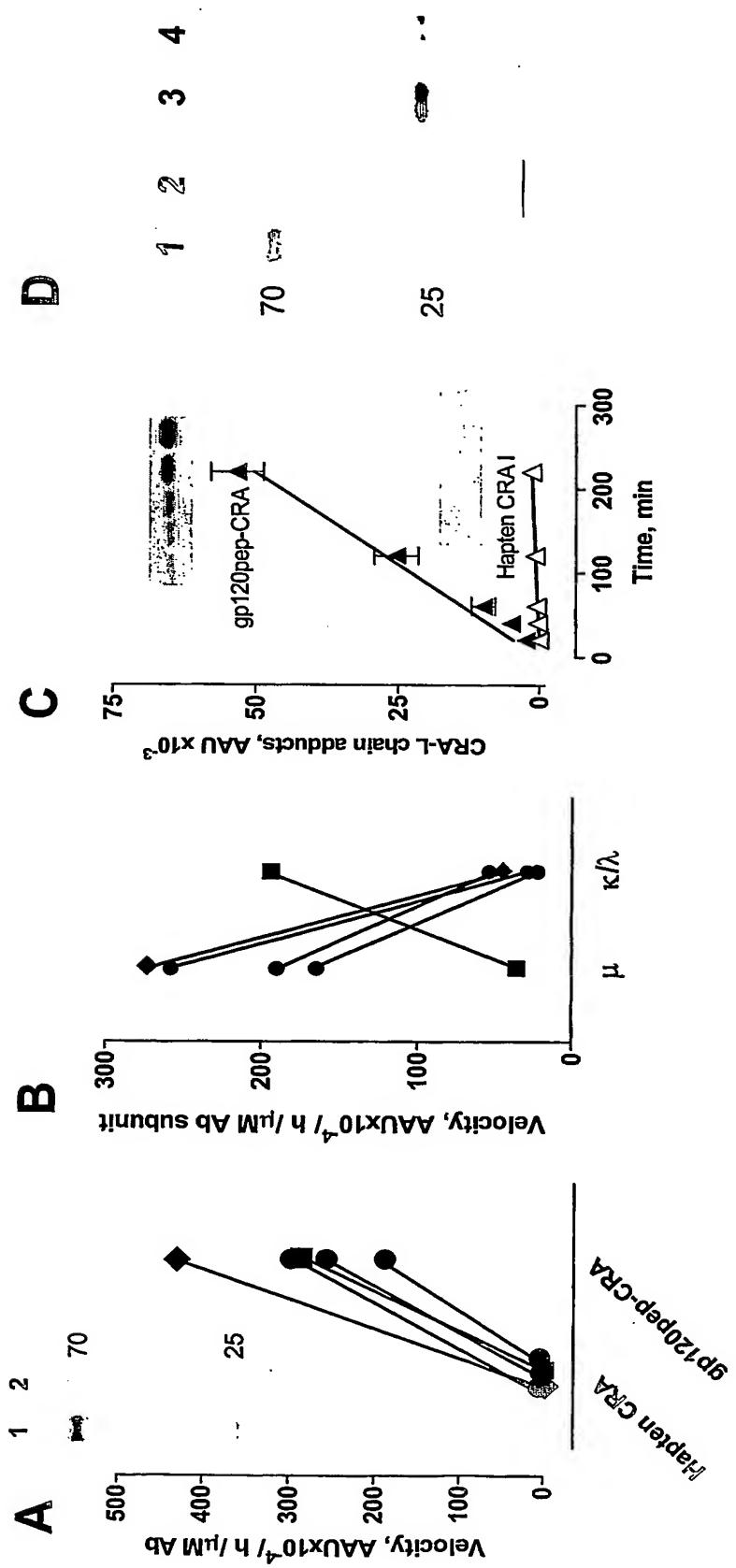


Fig 38



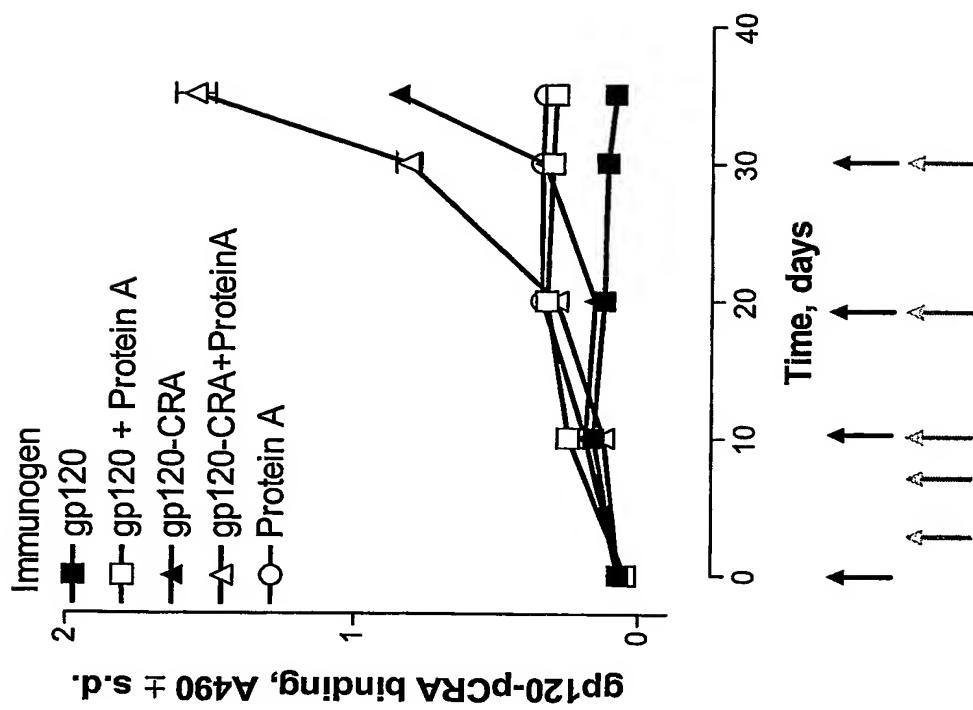


Fig 39



FIG 40

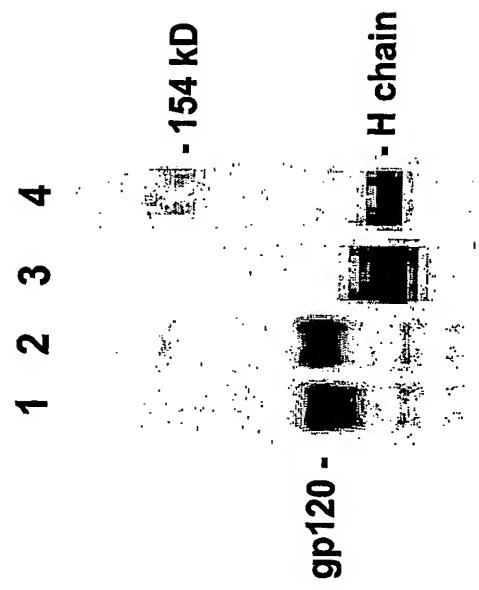


Fig 41

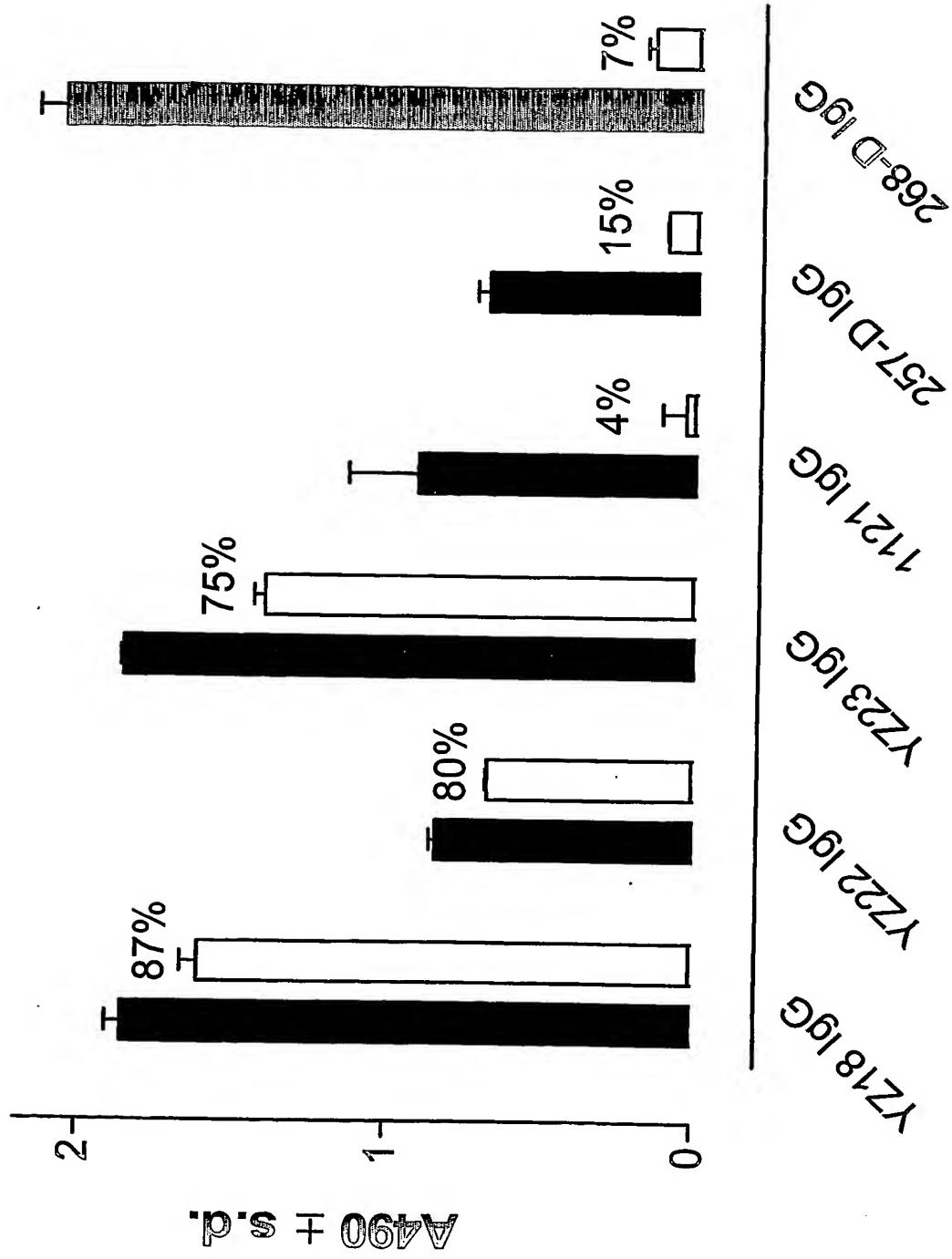


Fig 42

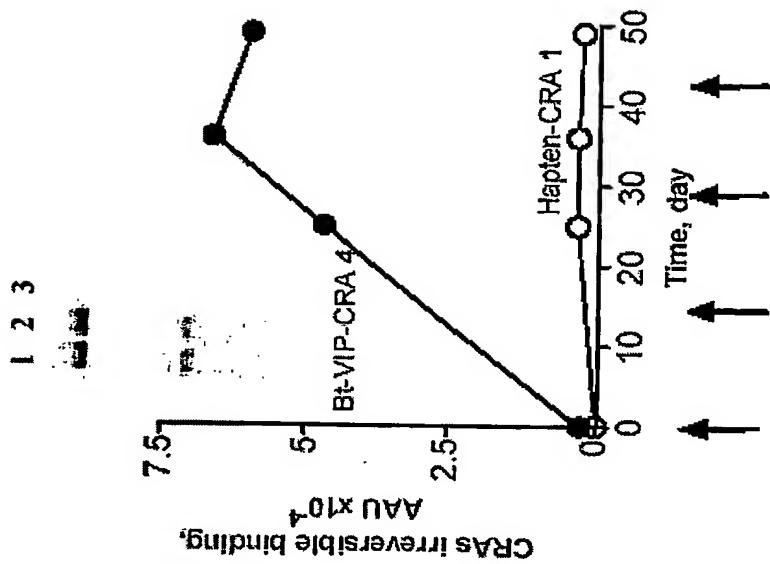


FIG 43

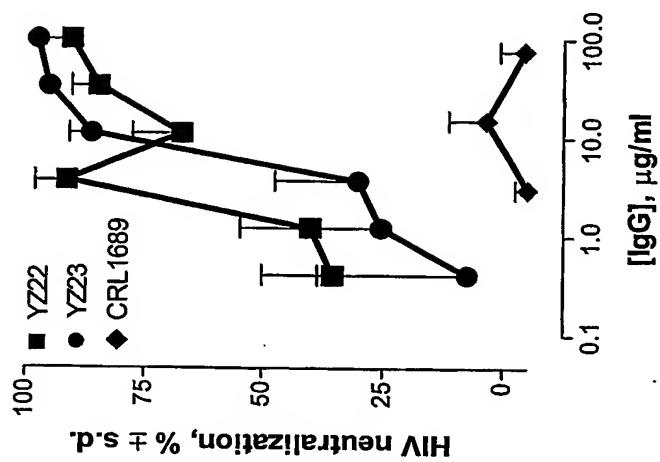
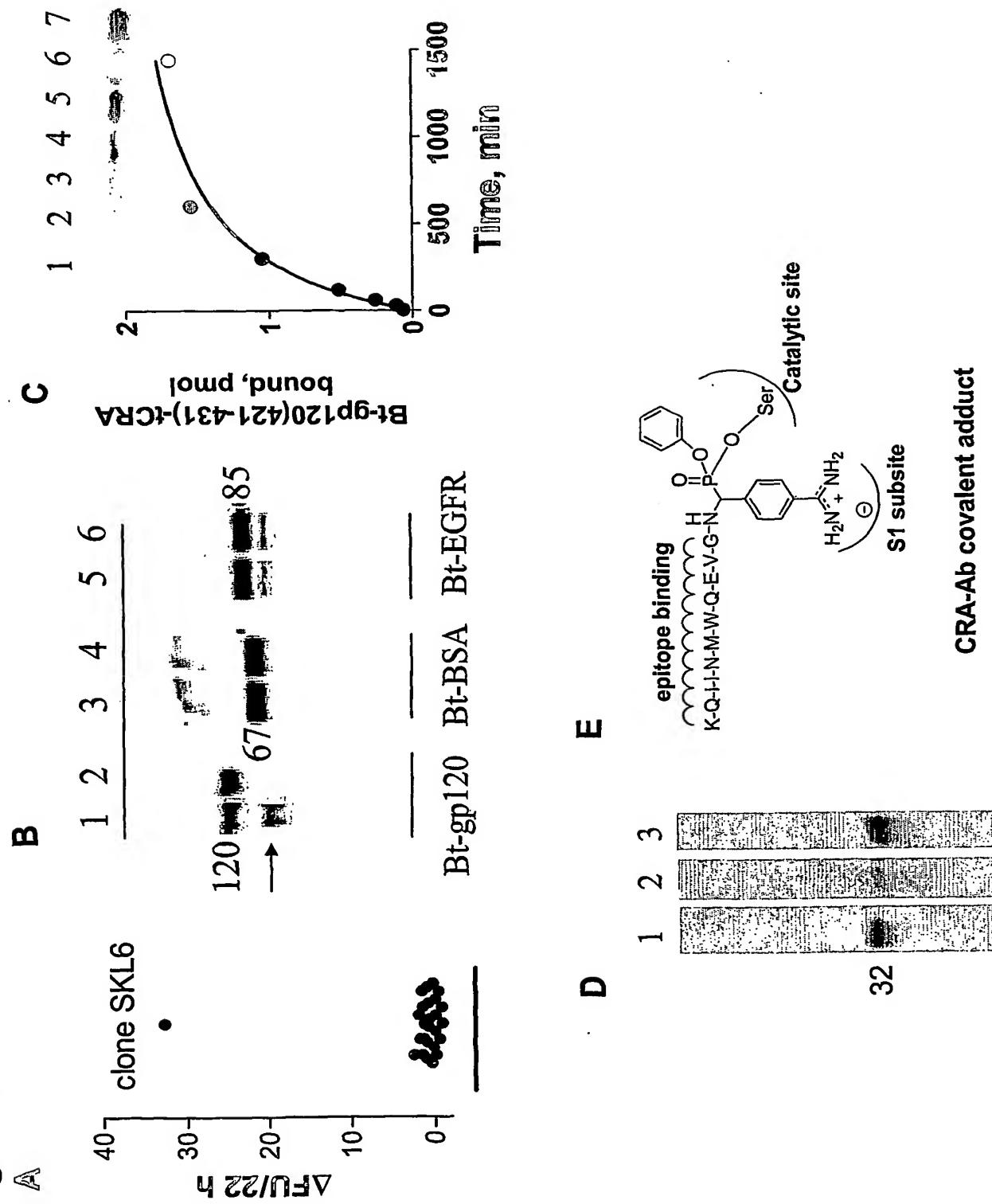


Fig 44

Fig 4.5



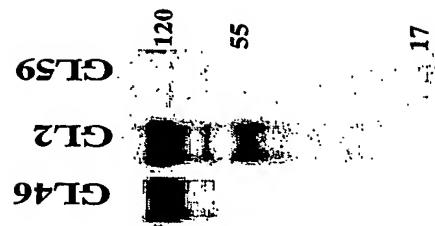
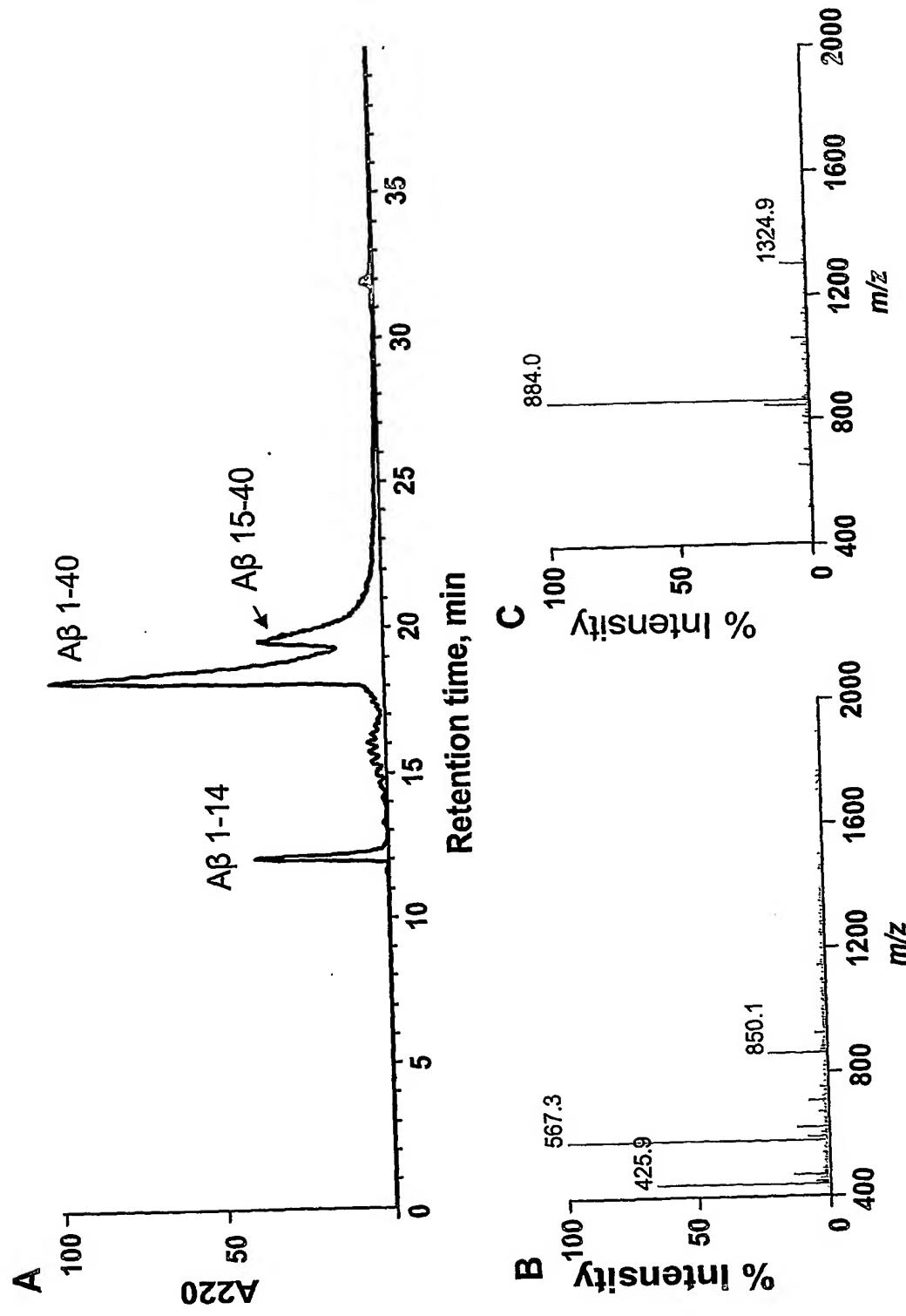
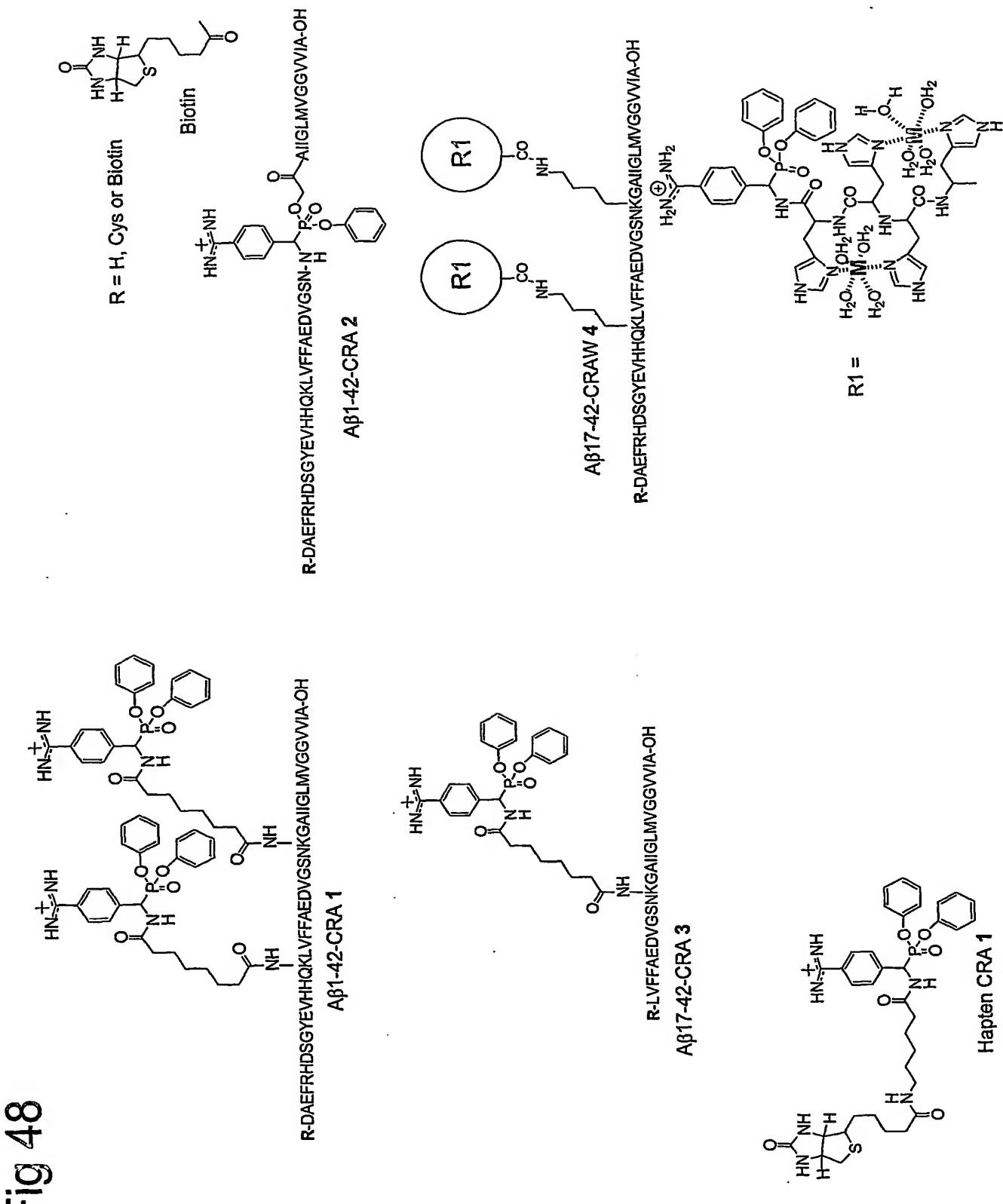
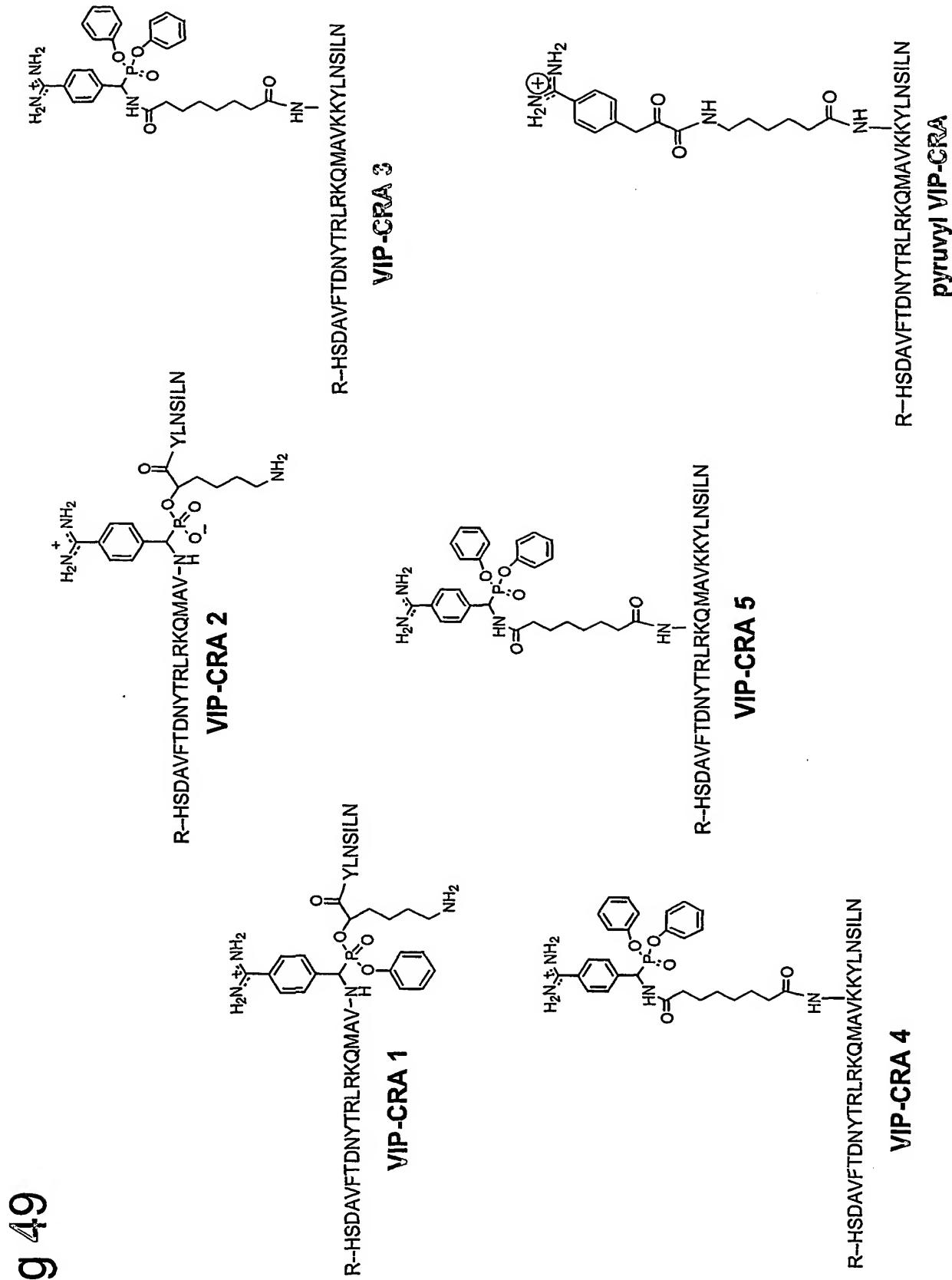


Fig 46

Fig 47







**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**